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ABSTRACT

This report describes the findings of a work committee on learning needs and media utilization, which conducted an investigation of: (1) the learning needs that exist at the macrolevel in South Africa in informal, formal, and nonformal education; (2) those needs that can be satisfied by the use of educational radio (ER) and educational television (ETV); (3) the use of ER and ETV in selected foreign countries; and (4) the structures for control of ER and ETV in selected countries. Following a description of the priority learning needs in southern Africa, the use of ER and ETV is described for Great Britain, Germany, the Netherlands, Japan, Israel, India, Asia, Pakistan, Russia, Poland, and a number of African countries. Additional chapters discuss some important considerations in the introduction of an effective educational broadcasting service and an analysis of the current situation with regard to radio, television, and educational media in South Africa. The appendix includes a summary of the limitations and potential of ER and ETV. (LMM)

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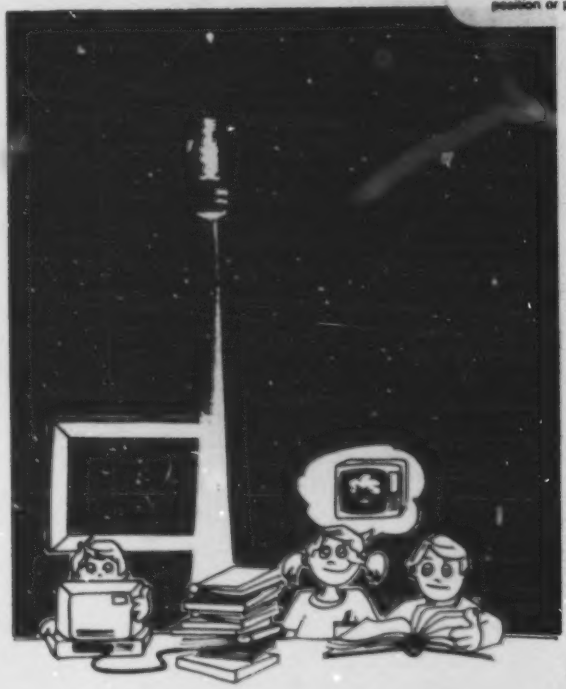

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The use of radio and television in education and training

Report of the Main Committee of the HSRC Education Research Programme

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Pretoria
Human Sciences Research Council
1984

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TO: THE HONOURABLE DR. G. v. M. VILJOEN, MINISTER OF NATIONAL EDUCATION

Dear Dr Viljoen

You are herewith presented with the report which at your request was prepared for the Main Committee of the HSRC Education Research Programme by the Work Committee: Learning needs and media utilization. The HSRC and the Main Committee of the HSRC Education Research Programme subscribe to the findings and recommendations contained in this report.

A summary of the report, containing the most important findings and the recommendations, has been included at the beginning of the report.

J.G. GARBERS
PRESIDENT
HUMAN SCIENCES RESEARCH COUNCIL

J.P. DE LANGE
DIRECTOR
HSRC EDUCATION RESEARCH PROGRAMME

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THE USE OF RADIO AND TELEVISION IN EDUCATION AND TRAINING: REVIEW, FINDINGS AND RECOMMENDATIONS

1. INTRODUCTION

This investigation was carried out by the Work Committee: Learning needs and media utilization which had been requested to conduct research into all possible educational media which could be used to satisfy particular learning needs in informal, formal and non-formal education. Because of the special potential of radio and television to make a significant contribution to the satisfaction of specific learning needs at macrolevel, and to do so within a short period of time, it was decided to commence the investigation with these two media.

For this purpose a project committee was constituted to consider the following matters:

- What is Educational Radio (ER) and Educational Television (ETV)?
- Which important learning needs can be satisfied by means of ER and ETV?
- How do foreign countries use ER and ETV and to what extent are their efforts successful?
- What are the different forms of control and financing with regard to ER and ETV elsewhere in the world and how relevant are they to Southern African conditions?

2. FINDINGS

2.1 In various developed and developing countries ER and ETV have already for a considerable time been very successfully used for purposes of education and training. The question that arises is therefore no longer whether ER and ETV should be introduced in the RSA, but how and for what purpose they should be used and to what extent they should be used to satisfy certain learning needs in the best way.

2.2 Research has indicated that the following learning needs that can be satisfied by ER and ETV also exist in the RSA (This list serves only as a first indication and it is accepted that it may change from time to time as a result of changing circumstances and needs of the country).

2.2.1 Technical literacy
2.2.2 Change of attitude with regard to technical occupations
2.2.3 Computer awareness and literacy
2.2.4 Teacher training
2.2.5 Training of trainers
2.2.6 School guidance and occupational guidance
2.2.7 Learning needs in the context of formal education
2.2.8 Social responsibility and community involvement
2.2.9 Economic responsibility
2.2.10 Learning needs of gifted and handicapped children
2.2.11 Road safety
2.2.12 Free-market system
2.2.13 Development of divergent thinking
2.2.14 Language
2.2.15 School readiness
2.2.16 General literacy
2.2.17 Parent training
2.2.18 Rural development needs
2.2.19 Health and welfare needs
2.2.20 Retraining and continuing training
2.2.21 Management training
2.2.22 Labour relations
2.2.23 Cottage industries
2.2.24 Communication
2.2.25 Defence/Civil defence
2.2.26 Do-it-yourself techniques
2.2.27 Civil affairs
2.2.28 Retrieval of information
2.2.29 Race relations
2.2.30 Legal procedure
2.2.31 High school of the air

2.3 As far as the implementation of ER and ETV is concerned, it was evident from the research that the following matters are indispensable for successful utilization of these media:

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2.3.1 A partnership between the broadcasting organization and the users

A balanced relationship between the users of ER and ETV and the broadcasting service is essential for optimal use of ER and ETV in order to ensure meaningful involvement of the user.

2.3.2 A broadcasting alliance between radio and television as far as educational broadcasts are concerned

In educational programmes radio and television complement each other and should function as a single unit.

2.3.3 Ongoing research

Ongoing research within an educational broadcasting service is essential for determining the needs of target groups, the effect of broadcasts, target sizes, etc.

2.3.4 Publications and other supporting media

The basic idea is that publications and other supporting media, together with ongoing research, form the two pillars on which an educational broadcasting service rests. Such additional media are made available to teachers and learners to provide pre- and after-care and include explanatory publications, work sheets, transparencies, slides and audio and video cassettes.

2.3.5 Adopting a well-founded modus operandi in programme planning from an educational and a training point of view

Programme planning should not be done in a haphazard manner but should be a purposeful activity conducted within a wider and often official syllabus.

Specialists such as academics, teachers, subject advisors, et al should on an organized basis share in the planning and implementation of all programme projects.

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this approach is carefully observed in for example Britain, Germany, Israel, Japan and the Netherlands.

2.4 The present use of ER and ETV abroad indicates that there are different ways of organizing and controlling such a service. The main issue is whether ER and ETV and other broadcasting services can be accommodated together in one organization and, if so, how. When considering an ER and ETV service for South Africa, not only factors such as cost, existing infrastructure and manpower will have to be taken into account, but also information on possible alternatives (cf. for example the authorities-controlled model in Israel; the national network-controlled model in West Germany and the relatively independent model of the BBC).

3. RECOMMENDATIONS

3.1 In view of the fact that Educational Radio (ER) and Educational Television (ETV) are elsewhere in the world successfully applied to meet specific learning needs (cf. Chapter 3) and because various urgent learning needs have been identified at a macrolevel in Southern Africa (cf. Chapter 2), it is recommended that ER and ETV be implemented as soon as possible and in a co-ordinated manner in formal, informal and non-formal education in Southern Africa to satisfy the high priority learning needs that have been identified. The potential contribution that ER and ETV can make to the solution of identified teaching and training deficiencies in Southern Africa cannot be overemphasized.

3.2 It is recommended that ER and ETV programmes be defined in the following manner to distinguish them from other radio and television programmes:

ER and ETV programmes are programmes that have been developed within the context of an overall training, instructional and educational strategy and that have in a systematic and ongoing manner been directed at informal, formal and non-formal education. An overall training, instructional and educational strategy inter alia implies that

- learning needs have been determined in a well-founded way;
- the extent to which ER and ETV can satisfy these needs has been determined, and that

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. broadcasting times have been specifically reserved for ER and ETV programmes in consultation with the institutions involved with particular target groups

There are other programmes that also have instructional and educational value but because of the incidental nature thereof these programmes are not considered as ER and ETV programmes.

3.3 It is recommended that the following should be basic premises in the implementation of ER and ETV:

3.3.1 The "Principles for the provision of education in the RSA" as formulated in the HSRC Education Report should serve as guidelines for ER and ETV programmes.

3.3.2 As far as formal education is concerned, ER and ETV can only succeed if the relationship between the broadcasting authorities and the educational departments is clearly set out from the start. It is also essential to see the use of radio and television in formal education as an integral part of the overall provision of education and satisfying of learning needs.

3.3.3 ER and ETV must not be separated but should function in a complementary fashion.

3.3.4 Informal, formal and non-formal educational programmes for ER and ETV should be considered and carried out together because of the interdependence of the learning needs at which these programmes are directed.

3.3.5 ER and ETV should be backed up with publications and other media (such as slides, sound cassettes, etc.). Therefore the ER and ETV service should from the outset make provision for the compilation and distribution of publications, as well as for the production and distribution of other supporting media.

3.3.6 High priority should be given to ongoing research with a view to determining learning needs, the most effective methods of programme planning

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and production and the effect of the programmes. A research section should therefore be established within the ER and ETV services from the start.

3.3.7 Programme planning should be done in a way that is accountable in respect of instruction (education) and training. Work committees consisting of specialists in the fields of broadcasting, the media, education and training, as well as the subjects involved, should be established to undertake the planning of programmes.

3.3.8 Interested groups reached through ER and ETV programmes should be involved at different levels.

3.3.9 The users[1)] (Category 2) of ER and ETV programmes should receive ongoing training in the correct use of the broadcasting media.

3.3.10 ER and ETV programmes should be planned in such a way as to ensure the best possible feedback (probably in the form of work sheets, etc.) from the learner to the instructor. Care should therefore be taken to ensure that programmes comply with clearly stated teaching objectives.

3.3.11 Because of the unique and specialized nature of ER and ETV, a section for ER and ETV should be structured in such a way as to allow this uniqueness to be realized to its full extent in the broadcasting setup.

---

1) The following categories of users can be distinguished:

Category 1: Education departments, other educational authorities and organizations, offering training.
Category 2: Teachers, training specialists, et al.
Category 3: All learners (children as well as adults).

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3.4 It is recommended that ER and ETV be established according to the following guidelines:

3.4.1 First possibility (within the SABC in consultation with interested institutions)

a. In view of the fact that the SABC has the necessary broadcasting expertise and infrastructure, ER and ETV should be established within the SABC, though mechanisms should then be created to afford the users of ER and ETV meaningful involvement in the service. This recommendation is mainly based on the BBC model.

b. Because of the uniqueness and specialized nature of ER and ETV, which includes continuing liaison with participating institutions, a section for ER and ETV should function independently from, but in consultation with, other programme sections.

c. Policy with regard to ER and ETV would be laid down by advisory bodies that have users (representatives from Categories 1 and 2) as members.

d. Work committees for programme planning

Work committees consisting of specialists in inter alia the following fields

- the subject field
- broadcasting
- teaching, and
- (industrial) training

should be nominated for each programme series by the project leader in consultation with the research section of ER and ETV.

e. Financing of ER and ETV would occur as follows:

- Partly by the supplier of ER and ETV (the SABC) from its own funds in view of the fact that it is the SABC's task to entertain, to inform and to educate.

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- Partly by the users (Category 1) of ER and ETV (including the State).
- From other sources that may be suggested from time to time.

f. Protected air time would be reserved for ER and ETV.

3.4.2 Second possibility (a new organization)

a. A separate organization for ER and ETV (Southern African Educational Radio and Television Service - SAERTV) broadly based on the Israel model should be established for Southern Africa.

b. The SAERTV would be managed by a board of control. The members of the board of control should be appointed by a cabinet committee of ministers concerned under the chairmanship of the Minister of National Education.

c. The SAERTV would be mainly responsible for the planning and supervision of the production of ER and ETV programmes for informal, formal and non-formal education. The production facilities of the private sector can be used and other possibilities may also be investigated.

d. Financing

The SAERTV would be financed by institutions such as the SABC, certain government departments, the private sector and those national states and members of the TBVC countries that wanted to become involved for their own domestic purposes.

e. Protected air time

Protected air time would be obtained by the SAERTV on the transmitters of the SABC.

f. Policy with regard to ER and ETV would be laid down by advisory bodies that have users (representatives from Categories 1 and 2) as their members.

g. Advisory bodies for ER and ETV

The advisory bodies would consist of representatives of the SAERTV and users of ER and ETV such as government departments, the SABC, the private sector, the national states and members of the TBVC countries.

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These advisory bodies would be appointed by a cabinet committee consisting of the ministers concerned, under the chairmanship of the Minister of National Education. The most important tasks of the advisory bodies would be to advise the board of the SAERTV on all matters concerning SAERTV broadcasts. It might be necessary to appoint more than one advisory body because of the range of diversity of the activities of the SAERTV.

h. Work committees for programme planning

Work committees composed of specialists in inter alia the following fields

- the subject field
- broadcasting
- education, and
- (industrial) training.

would be appointed for each programme series by the project leader in consultation with the research section of ER and ETV.

3.4.3 Financial implications of the proposed possibilities

a. If respectively 750 and 900 minutes of ETV and ER programmes per service were broadcast, the preceding recommendations would have the following implications as far as the first year was concerned. (It would naturally not be possible to broadcast 750 (ETV) and 900 (ER) minutes right from the start).

1. Programme production (cf. Appendix C for more details)

(i) Informal Education

ETV	R24 000 000
ER	3 360 000

(ii) Non-formal education

ETV	12 000 000
ER	3 360 000

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(iii) Formal education

ETV	24 000 000
ER	3 360 000
Total amount for programme production:	R70 080 000

2. Office accommodation, furniture and sundries

First possibility (3.4.1)	
Once only	R 170 000
Current	1 500 000
Second possibility (3.4.2)	
Once only	300 000
Current	2 000 000

3. Staff

First possibility (3.4.1)	2 600 000
Second possibility (3.4.2)	3 500 000

4. Publications and supporting media

First possibility (3.4.1)	R 2 000 000
Second possibility (3.4.2)	2 000 000

5. Research

First possibility (3.4.1)	R 500 000
Second possibility (3.4.2)	500 000

b. Summary

	First possibility	Second possibility
Programme production	R 70 080 000	R 70 080 000
Office accommodation, furniture, etc.	1 670 00	2 300 000
Staff	2 600 00	3 500 000
Publications and supporting media	2 000 00	2 000 000
Research	500 000	500 000
	R 76 850 000	R 78 380 000 [1]

[1] The hire of transmitters and the cost of the possible erection of separate production facilities have not been included in these calculations.

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3.4.4 The work committee recommends that the first possibility be implemented and bases its decision inter alia on the urgency of integrating radio and television in education, the cost advantages of the first possibility and particularly the elimination of any duplication of facilities and high-level manpower offered by such a system. However, two members of the work committee thought that the second alternative was more suitable (their reasons were not recorded).

3.5 A video cassette service should be introduced together with ETV.

3.6 The television service for Blacks should eventually be extended to cover the rural areas as well.

3.7 Further investigation should be conducted into

3.7.1 the problems concerning copyright and ways of meaningfully using ER and ETV in teaching and training;

3.7.2 the different ways of providing and maintaining television sets and power generators economically;

3.7.3 the possibility of enabling learners to obtain recognized qualifications such as a matriculation certificate with the help of ER and ETV;

3.7.4 the development of an infrastructure for establishing teleclubs in order to make optimal use of ER and ETV;

3.7.5 the creation of mechanisms for close liaison between the ER and ETV services and a future centralized and decentralized infrastructure for educational technology and curriculation;

3.7.6 the development and implementation of interactive television systems;

3.7.7 interstate collaboration with regard to ER and ETV;

3.7.8 future multimedia utilization in education and training (including ER and ETV), and

3.7.9 the training of the users of ER and ETV.

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THE UTILIZATION OF RADIO AND TELEVISION IN EDUCATION AND TRAINING

CHAPTER 1

INTRODUCTION AND ORIENTATION

1.1 INTRODUCTION

The second phase of the HSRC's investigation into education, known as the HSRC Education Research Programme, is being guided by a Main Committee with Prof. J.P. de Lange as chairman. Early 1983 this Main Committee appointed a work committee to conduct an investigation into Learning needs and media utilization.

This, the first report of the work committee, deals only with the use of radio and television in education and training and therefore does not cover the broad field of learning needs and media utilization. The work committee will in later reports deal with other facets of media utilization.

1.2 ORIENTATION

The following recommendations are some of those made in the HSRC Education Report:

"1) That as a policy decision educational technology be accepted as a fundamental factor in the planning, development and implementation of educational provision at all levels, both in the formal and non-formal sector."

"4) That, in order to expedite the extension of educational technology in solving problems confronting education, the concepts of educational technology form one of the bases of pre and continuing training of all categories of personnel involved with teaching, training and extension services."

"5) That, as an important contribution to educational technology could lie in the integration of television, computers and telecommunications, it is vital that top-level co-operation be established between the educational authorities, the GPO, the SABC and the private sector. The

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necessary liaison should be effected as a matter of urgency through the national service."

"7) That urgent measures, employing the potential of educational technology, be taken in the non-formal area of education with particular focus on literacy, health and social education, agricultural extension, preparatory skills for the disadvantaged at all levels, and continuing education generally."

(Provision of Education in the RSA, pp. 171-172).

Recommendation 5) above received attention from the Work Committee: The computer in education and training as Project 9 (investigation into the use of the computer, television and radio and other information systems such as BELTEL with a view to learning and teaching). However, since the field is so wide, a new work committee known as the Work Committee: Learning needs and media utilization was established to investigate all aspects of learning needs and media utilization. This commission extends further than recommendation 5) as it covers the total sphere of recommendations 1), 4), 5) and 7).

In the light of its terms of reference the work committee started its work by considering learning needs in the RSA. It soon became clear that the identified learning needs at macrolevel were so extensive that media that could make a contribution at macrolevel to the satisfying of these learning needs had to receive attention. It was therefore decided to begin by conducting an investigation into the possible utilization of Educational Radio (ER) and Educational Television (ETV) in education and training and the work committee consequently set up a project committee consisting of the following persons and having the right of co-option:

Prof. P.J. van Zyl (Chairman)
Dr S.W.H. Engelbrecht
Dr P.F. Erasmus
Dr J. Melder
Mr A. Muller

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The following two persons were co-opted by the project committee:

Miss C.F.M. van Wyk
Dr D.P. van Vuuren

1.3 AIM OF THE INVESTIGATION

The aim of the investigation was to

(i) determine in an accountable way the learning needs that exist at macrolevel (in Southern Africa)[1] in informal, formal and the non-formal education[2] and which of these needs can possibly be satisfied by the use of ER and ETV (cf. Chapter 2);

(ii) investigate the use of ER and ETV in selected countries (cf. Chapter 3);

(iii) investigate the structures for the control of ER and ETV in selected countries (cf. Chapter 3), and

(iv) make recommendations with regard to

- the possible use of ER and ETV in Southern Africa, and
- additional relevant research (cf. Chapter 5).

1.4 RADIO AND TELEVISION AS EDUCATIONAL MEDIA

1.4.1 Definition of ER and ETV

Various definitions of ER and ETV can be found in the literature on the subject (cf. inter alia De Vera 1967 and Hancock 1971). From the literature it is clear that it is very difficult to distinguish between educational programmes and other programmes that also have an educational

---

1) Wherever "Southern Africa" is used in this report, the reader has to understand this as meaning the RSA (including the national states) and the TBVC countries.

2) These concepts are used here in accordance with their definitions given in the HSRC Education Report.

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bearing. In the "Report of the Committee of Inquiry into the Uses of Television in Education" that was published in New Zealand in 1972, the following is stated: ..."There are many entertainment programmes which are educational in nature and many specialised instructional programmes which are both informative and entertaining" (1972: 25). A distinction is consequently drawn between "Educational programmes" and "Educative programmes". The report continues and defines these programmes as follows:

"2.2.1 Educational programmes

These fall into three broad groups -

(1) Programmes designed for use by schools, universities, and other institutions forming part of the national education system.

(2) Programmes designed for home viewing and arranged in series to help viewers towards a progressive mastery or understanding of some skill or body of knowledge. Examples of such programmes already broadcast include 'Japanese Brush Painting', 'Towards 2 000', 'Issues for Parents', and 'Maths and Meaning'.

(3) Programmes designed for home viewing by specialist professional or industrial groups. Programmes in groups (1) and (2) will normally be supplemented by written material and/or class instruction" (1972: 25).

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"2.2.2 Educative programmes

These are programmes designed for home viewing as part of the general pattern of television, without written or class support, and intended to offer some enrichment of knowledge or understanding of affairs. Many programmes in this category are already being broadcast in New Zealand, the 'Civilisation' series being an outstanding example" (1972: 25).

According to the definitions above it is possible to distinguish between programmes with a definite educational bearing and other programmes with a coincidental educational bearing.

For the purpose of this report ER and ETV programmes are defined as follows: They are programmes that have been developed within the context of an overall training, instructional and educational strategy and that have in a systematic and ongoing manner been directed at informal, formal and non-formal education. An overall training, instructional and educational strategy inter alia implies that

(i) learning needs have been determined in a well-founded way;
(ii) the extent to which ER and ETV can satisfy these needs has been determined, and that
(iii) broadcasting times have been specifically reserved for ER and ETV programmes in consultation with the institutions involved with particular target groups.

There are other programmes that also have instructional and educational value but because of the incidental nature thereof these programmes are not considered as ER and ETV programmes.

1.4.2 Potential and limitations of the broadcasting media

Experience in various countries (cf. Chapter 3) has taught that the broadcasting media undoubtedly have the potential to make a positive contribution to education and training as well as to social development in a country. Appendix A contains a précis of Hancock (1971: 180) on the potential and limitations of ER and ETV. The report of the New

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Zealand investigation into ETV (1972: 26,27) gives a good description of television as a medium of instruction (cf. Appendix B).

To summarize, the following can be stated:

(1) Television as a medium of instruction

- is a visual medium that can be used to very good effect in certain subject fields;
- makes it possible to reach large numbers of learners at the same time;
- can very quickly deal with changes in curricula and the consequent in-service training of teachers and saves much time and money in this way;
- can play a major role in combining various media in the instruction process and contributes in this way to more effective education and training through a multimedia approach;
- can contribute to making high quality instruction available to all learners (especially in areas and subject fields where there is an inadequate number of trained teachers and trainers);
- utilization with video recorders and printed material opens many possibilities for the learner to learn at his own pace;
- has certain limitations of which the most important are the following:
  - it is a one-way communication medium (though recent developments do make interaction possible) that makes special demands with regard to the training of the users and the making available of printed matter and other media;
  - it is a more expensive medium than the radio and requires the involvement of large numbers of learners, and
  - electricity (alternating current, battery or solar dynamo) must be available

(2) The Radio as a medium of instruction

- can reach large numbers of learners because of the availability

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of cheap reception sets;

- can with great success be used for education and training together with television and other visual and printed media;
- is a much cheaper medium than television;
- does not necessarily require the availability of electricity (alternating current);
- has certain limitations of which the most important are the following:
  - like television it is mainly a one-way communication medium, and
  - it is a non-visual medium and therefore exposed to more disadvantages with regard to communication with the learner than is television.

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CHAPTER 2

LEARNING NEEDS IN SOUTHERN AFRICA: SOME PRIORITIES

2.1 INTRODUCTION

Provision of education in the RSA is complicated by the fact that the educational needs of the different population groups differ. Some educational needs are typical of the First World (the developed industrial countries) and others are characteristic of the Third World (the developing countries). Some of the educational problems of the developing countries are an increasing school population, illiteracy of the adult working population, a high rate of failure at the primary school level, a lack of trained manpower in the education system, urban and rural disparities in the provision of education and syllabi and curricula that are not relevant to the needs of the learner. A differentiated approach to the learning needs of the population groups in Southern Africa is a basic requisite. In a national survey of educational technology and its successful application Ely mentions four generalizations of which two are particularly applicable:

(i) Educational technology is most successful when used in direct response to an identified need of those for whom it is meant to serve.

(ii) The use of educational media is not as important as the development of suitable contexts for their use. A situation analysis must eventually lead to decisions regarding what media can be used to achieve certain learning objectives at specified times with specified learners. Amsey (in Wells 1976: 104) also points out that a learning need has to exist before educational media can be introduced and be effective. There must also be a desire to satisfy the learning needs with the help of educational technology.

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2.2 THE CONCEPT LEARNING NEEDS

2.2.1 A well-founded educational approach

It emerges clearly from the literature on the subject that it is taken for granted that the reader knows the meaning of the concepts need and learning need. A clear definition is seldom offered. In order to define the concept learning needs, it was decided to proceed from an educational perspective. Learning needs should be considered in the context of education as a whole. Education implies the guidance rendered by an adult as the educator to a maturing child to bring about the latter's maturation in the expectation that the assistance will lead to adulthood (Van Zyl 1975: 122,146). As far as learning needs are concerned, it is important to remember that an adult also is still developing (Van Zyl 1975: 122), which implies that man will continuously develop new learning needs. A person has to give expression to his own adulthood within a specific cultural environment. By satisfying learning needs a person should increasingly portray the image of adulthood of his society.

2.2.2 Learning needs: definition and differentiation

Against this background the following definition of learning needs will be used:

A learning need represents the knowledge, attitudes and skills needed by an individual to adequately take part in the life of a particular society. Because of the tempo of change in society learning needs are of a dynamic nature - new learning needs continuously arise and have to be satisfied. Learning needs also have a differentiated character: on the one hand they are the product of local circumstances and specific target groups, and on the other hand they are a basic necessity to certain groups, to other groups they are substitutes for or complementary to formal education and to yet other target groups they are merely of an enriching nature.

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When satisfying certain learning needs through the provision of education it has to be remembered that certain contents can be offered on a national basis. Mathematics, official languages and foreign languages can for example be accommodated in this way whereas environment studies, health, self-help techniques and arts and crafts will have a predominantly local flavour. This distinction between general and specific or local learning needs also applies to non-formal education.

Within one society one can therefore distinguish learning needs at macro, meso or microlevel. In the RSA learning needs on each of these levels can be identified for each population group. The difference between the learning needs of rural and urban target groups will also become clear from the type of communication medium used to satisfy these needs. Whereas radio is the appropriate medium for some target groups because of the present limited range of certain television transmissions, television is the medium that is readily available to urban target groups. For the purposes of Southern Africa it is reasonable to regard learning needs at macrolevel as learning needs that can in general be satisfied on a national scale. Mesolevel learning needs should be considered within a regional context and microlevel learning needs as those of a local community or a local group of schools.

Learning needs should be looked at in terms of a continuum extending from the universal as one pole to the particular as the other pole. Learning needs also emanate from demands made on the individual by the society (also the professional world) in which he finds himself. His personal needs and interests may also give rise to certain individualized learning needs (for example hobbies).

(1) Universal learning needs

By universal learning needs is meant that the learner will, in order to lead a purposeful life, need to have an intellectual, skills, value (for example moral, social, aesthetic) and religious per-

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spective on reality.

(2) Basic learning needs

Müller (1981: 34/35) includes the following:

- Basic ability to read, write and calculate.
- Basic knowledge of fundamental scientific concepts for a basic understanding of hygiene, health, nutrition, cultivation of the soil, stockbreeding and economics.
- Practical knowledge and skills to make a living and support a family (which may include larger and smaller family units) and a household.
- The ability to take part in community life and to understand the nature of society, for example its history and image of itself, the duties and tasks of government and administration, taxation, social security, co-operatives and self-help movements.
- The development of the individual's ability to think critically and to form his own world and to take an active part in the development process.

Technical knowledge and skills can be added to this list.

(3) Particular learning needs

They are an extension of the basic learning needs but are more differentiated in terms of target groups and areas. They may also be learning needs concerned with hobbies and interests. Regarding subject contents, they may include themes such as environment studies. As a result of the mastering of particular subject contents man becomes competent and willing to integrate with the life-style of his own community.

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(4) Conclusion

The gradual integration with community demands, customs and values as part of a socialization process, is essential for the survival of any community (Van Zyl 1975: 237).

2.2.3 Creation of context for learning needs

A specific target group is often not aware of the fact that it lacks knowledge that will in future be necessary. This situation may arise as a result of rapid technological progress or may be due to something outside its field of experience or thought. This can be illustrated by the problems surrounding the introduction of courses in computer awareness and computer literacy. If pupils or teachers are asked today to what extent they require such courses, many will probably reply that they do not consider knowledge of computers as a learning need. However, research conducted on the computer and the growing impact of the computer on society refutes this point of view. People can be made aware of the existence of this learning need by broadcasting programmes on the computer in industry, administration and education on television or over the radio, or by publishingarticles in the press. In a word, in satisfying certain learning needs it will be essential to create the context beforehand.

2.2.4 The variability of learning needs

Any system for the provision of education based on learning needs, cannot function solely from macrolevel to microlevel. According to Müller (1981: 44) feedback from the local level has to be obtained and learning needs experienced at this level have to be considered from the onset.

The dynamic nature of learning needs referred to earlier, necessitates feedback. When one learning need is satisfied, new learning needs may arise, for example broadcasts on computer awareness will create a need for more knowledge of programming or a need for printed material supporting the broadcasted programme. Toffler (1975: 27-40; 1981:15-24) points out that a period of increased change is being experienced.

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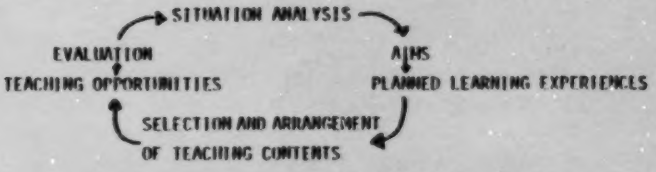
He mentions the "great, growling engine of change - technology" (Toffler 1975: 32). Examples of rapid change are the increasing tempo of urbanization, utilization of energy and resources, economic growth to super industrialism and accelerated acquisition of knowledge, which in its turn promotes technological growth. Technology feeds on itself and makes technology possible. We can with good reason speak of explosive changes (Toffler 1981: 20).

The satisfaction of certain learning needs also creates the need to master new challenges which in turn results in new learning needs arising. Knowledge of certain facilities or services often causes a need for the possession of the facilities or the utilization of the services. In this way economic growth is promoted.

From the above it is clear that learning needs can rapidly undergo a shift in emphasis or that new learning needs can arise very quickly. It must therefore be emphasized that the learning needs that were identified in this interim report are the learning needs that currently exist. They can change within a very short time, which consequently makes feedback and follow-up work essential if the provision of education is not to be anachronistic.

A healthy didactic foundation is of the utmost importance here. In the presentation of educational programmes over the radio or on television decisions about learning needs and contents represent the process of curriculation. A conceptual definition is necessary at this stage: A curriculum is selected and systematized instructional contents that establish a programme for instruction which makes provision for a functional relation between analysis of the situation, aim, planned learning experience, actualization opportunities and evaluation (Krüger 1979: 44/45). The cycle can be diagrammatically represented as follows:



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As a series of successive cycles the results represent a teaching programme. A sort of spiral develops in this way, aiming at a threefold orientation with regard to

(i) society,
(ii) the learner,
(iii) the particular cultural propagation for which a specific curriculum takes the responsibility.

Various benefits are negotiated by using such a cycle for the identification of learning needs, provision of education and essential feedback:

(i) Learning needs can be effectively identified and directly linked up with the provision of education
(ii) By means of continued situation analysis it can be determined whether the proffered subject contents satisfy the learning needs and which learning needs arise from this or which completely new learning needs have originated.
(iii) The cycle can be used for purposes of planning, feedback and evaluation. It therefore has criterion characteristics and can be applied diagnostically.

Different decision-making techniques such as the Delphi and nominal group techniques can be used to identify and adapt learning needs.

2.3 IDENTIFIED LEARNING NEEDS WITHIN THE SOUTHERN AFRICAN CONTEXT

2.3.1 Introduction

(i) Both in educational research and in discussions with educationalists, business and community leaders, numerous learning needs have over the past years been identified - some of course more urgent than others
(ii) For the purposes of this report needs that have not yet been adequately provided for in conventional ways, will be concentrated on
(iii) It will be indicated which learning needs fall mainly in the formal, the non-formal and the informal field. This classification should not be considered final and rigid. A number of learning needs could just as easily be identified in the formal, non-formal and informal educational contexts.

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(iv) Learning needs have not been arranged in order of priority.

2.3.2 Brief description of identified learning needs [1]

(1) Technical literacy (mainly in the field of informal education)

Reference was earlier made to the rapid tempo of change due to developments in the field of technology. People should not only be made aware of this, but should also be exposed to this technology. Technological literacy is spoken of in this regard: We live in a technological age, but we are often technologically illiterate. More important even than the lack of knowledge is our attitude. Technical literacy commences at the everyday level with things such as the repair of a plug where the wires have to be connected correctly. Technical literacy therefore involves technological and technical know-how.

(2) Change of attitude with regard to technical occupations (mainly in the field of informal education, but including aspects of formal education)

There is a clear imbalance between the predominantly academically oriented education in the RSA and the manpower needs of the country. There is an urgent need for greater canalization of all population groups to technical education. The low pattern of interest in technical occupations (16% of White and 2% of Black pupils follow a technical course) has to be increased through well-planned publicity and guidance programmes. More interest in these occupational fields is of vital importance and resistance to them has to be overcome. Parents should be able to experience an equal degree of pride in sending their children to a technikon or to a university. This requires changing attitudes in which the radio and television can play a major role.

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[1] The fields of provision indicated between brackets next to each learning need are merely a classification aimed at ER and ETV.

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(3) Computer awareness and literacy (including aspects of informal, non-formal and formal education)

The introduction of the computer, and in particular of the microcomputer, has had a marked effect on man's life, but an even more dramatic effect on man's way of life and way of thinking is anticipated. Knowledge of the computer and experience of operating computer terminals are to an increasing extent requirements for a job and also for positions at managerial level. Education consequently attempts to satisfy this need. Not only is the computer used as a medium, but computer awareness and computer literacy are increasingly striven after - not only for those pupils intending to follow an occupation in the computer industry, but for the great majority of pupils, since such knowledge is of fundamental importance to almost everyone of them. Even administrative staff such as booking clerks in the S A Transport Services and salary clerks at various institutions have to be trained in the use of computer terminals.

This need however extends beyond educational institutions since the working adult is also increasingly confronted with the computer and needs training.

All the population groups of the RSA display this need to an equal extent. While it is essential to introduce courses in computer awareness and computer literacy in formal education, this is one learning need that can also be satisfied in non-formal education as well as in an informal manner.

(4) Teacher training (mainly in the field of formal education)

The need for training in this category may quantitatively affect a limited number of people in a certain population group, but because of its eventual effect on the population as a whole it is of special significance and as such is handled by a separate work committee of the HSRC. This report deals with the question of how the radio and television can contribute to satisfying this need.

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The following matters are of special significance:

- Educational development is particularly important to keep abreast of developments in society for which education has to prepare people. Therefore educational innovation is of cardinal importance, despite the fact that the teaching profession is traditionally inclined to oppose it. "Change is often regarded by educators as a painful process and, therefore, they cling to the outmoded rather than suffer the pain of change" (Ruth Davies). The application of all available resources is but one of the matters necessitating ongoing in-service training of all teachers for the benefit of education as a whole.

- Another matter is the inability, even of the most competent teacher, to identify learning disabled and highly gifted pupils at an early stage. Apart from the training programmes offered by the departments of education there is still an urgent need for training programmes with a wider impact.

- There is a large number of Black and Coloured teachers who are inadequately qualified to teach effectively. If Std 10 plus a professional qualification is considered as a minimum requirement, only 14,5% of all Black teachers are adequately qualified. So far conventional in-service training has managed to make little difference to the situation. In 1980 only 1 434 Black teachers from a total of 70 145 were involved in in-service training courses (HSRC Report, p. 66).

- Owing to an ever-growing school population a huge number of teachers will have to be (re) trained within the next few years and the mass media will be able to play a major role here.

- There is a particular shortage of qualified teachers for certain subjects such as Mathematics and Physical Science, and to date this shortage has also not been eradicated by conventional methods.

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- Teachers have to be trained in the integration of media (also ER and ETV) in the didactic situation. In Germany the Institut für Film und Bild involves senior teachers in the production process for one year. Teachers are also involved for shorter periods in courses on the utilization of media and these teachers in their turn act as course leaders for other groups.

  It is therefore clear that there are many pressing learning needs in this regard for which ER and ETV should be carefully considered.

(5) Training of training specialists (in the field of non-formal education)

In the private sector there is a very urgent need for trained trainers in the different industries. It appears from a recent investigation that only 16% of the trainers (from a group of approximately 14 000) had any educational background and that 56% of them had Std 8 as their highest educational qualification.[1)]

The training of trainers in the private sector occurs in particular in the field of non-formal provision of education.

(6) School guidance and career guidance (mainly in the field of formal education with aspects of non-formal and informal education)

Within the system of differentiated education there are two requirements:

- Pupils must receive education in accordance with their potential.
- Pupils must receive guidance in order to be able to make an independent educational and vocational choice with a view to realizing their particular abilities optimally with due consideration of the needs of the country.

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1) Data obtained from HSRC.

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"The necessity for a school guidance service as an integrated part of the formal educational system is implicit in any consideration of the following poles: namely the school's task to give each pupil the schooling and formative education to which he is entitled, with due allowance for the needs of the country on the one hand, and the pupil's right to self- determination and to make his own choice on the other" (HSRC 1981: 4[illegible]).

The pupil has to achieve self-realization in a personal, social, school and occupational context. Consequently a general guidance component and a careers guidance component have to be provided. Since problems experienced by pupils require specialized aid, it is undesirable to make the general guidance and careers guidance the responsibility of one person. All pupils will work at some occupation on leaving school and while at school they receive education which is linked to career guidance. This fact makes it essential that career guidance should be presented as a specialized service. Technological and industrial development has forced specialization upon the occupational sector which in its turn makes guidance essential in order to orient prospective workers in the complexities of the occupational world. The increase in the population - particularly the Black population - also makes it essential that career guidance to school-going children should be extended at school.

"Research shows that in general school leavers are ignorant about future study and occupational opportunities and that even at the end of their school careers they have not made a choice regarding their future occupation" (HSRC 1981: 46). At present "the school guidance counsellor has very little influence on the study and occupational choices of pupils" (HSRC 1981: 47).

Concerning the question of general and careers guidance the HSRC Investigation into Education indicated a further demand in two instances where media could possibly play a supporting role:

. Career-oriented training of guidance personnel.
. The establishment of an infrastructure for guidance within the

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structure of education at both the centralized and decentralized levels.

Because there is also an urgent demand for general school guidance and careers guidance, particularly in non-formal education, communication media such as the radio can play a supplementary and enriching role at the regional level.

(7) Learning needs in the context of formal education

The contributions that ER and ETV can make to formal education are unlimited because of the dynamic nature of education. Close liaison with the proposed co-operative educational service for curriculum research and development will be essential (cf. HSRC Education Report). The educational service will be well-informed of existing learning needs, the latest trends and the need for innovation and improvement in education that can in a particularly striking way be introduced by ER and ETV at macrolevel.

Common syllabus contents that are applicable to all education departments can be conveyed concisely by ER and ETV, hints on implementation can be given and further research can be stimulated. Manuals for the introduction of syllabi can be replaced by ER and ETV programmes and other media which can be used repeatedly until teachers have grown used to them, these series can also be used to good effect for the training of new personnel.

By combining various media in instruction and learning, ER and ETV can also contribute to training in the effective use of multimedia in education. The educational service for curriculum research and development will have the expertise available to identify needs and deficiences on a continuous basis and will have the infrastructure required to take part in a meaningful way in the composition of programmes, evaluation and feedback.

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ER and ETV can play an important role in creating a background for teachers and pupils with regard to subjects of which their knowledge would otherwise have been inadequate. Curriculum packages (multimedia) can be provided to make this possible.

Where there is an insufficient number of trained teachers for specific subjects ER and ETV series of lessons can help out, for example in problem areas in the teaching of physical science, languages, literature, etc.

ER and ETV can also play a very important role in supplementing and enriching the school curriculum - also within the cultural context.

(8) Social responsibility and community involvement (forming of attitudes can occur in the fields of formal, non-formal and informal education)

The media can play an important role in the forming of attitudes. Social responsibility implies the obligations arising from being a citizen and from community involvement. Radio and television can promote the forming of positive attitudes in a culturally heterogeneous community.

(9) Economic responsibility (mainly in the field of informal education)

Economic responsibility concerns the sphere of the individual's financial commitments towards himself, his community and the State. It concerns sound financial management, self-sufficiency and the meeting of obligations.

(10) Learning needs of the gifted and the handicapped pupil (in the field of formal, non-formal and informal education)

Media such as the radio and television can apart from playing a training and publicizing role also be of vital importance in the presentation of enriching and remedial programmes on an individual basis, in the design of suitable educational programmes for highly

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gifted children and children with learning problems, and in the training of selected teachers to identify highly gifted pupils. The HSRC Education Report refers to neglect of highly gifted and talented pupils in education (HSRC 1981: 36).

(11) Road safety and occupational safety (mainly in the fields of informal and formal education including possible aspects of non-formal education)

Few people will challenge the statement that formal and informal education have an enormous educational task in this regard. Considering the loss of lives, the grief this causes, the loss of manpower and the cost to the RSA's economy, we can justifiably speak of a priority learning need here. Educational radio and television can in both formal and informal education and even in non-formal education play a role in making people aware and in educating them. Occupational safety is especially important in non-formal education.

(12) The free-market system (mainly in the fields of formal, non-formal and in-formal education)

Bearing in mind the increasing tempo and extent of urbanization and Westernization of the Black population groups there is a need on their part for an understanding of the capitalist free-market system. A high percentage of the children of all the population groups are raised in environments where they do not acquire sufficient concrete and practical experience of the free-market system. Understanding the free-market system is a prerequisite for participation and survival in Western-oriented society.

(13) The development of divergent (lateral, creative) thinking (mainly in the field of informal education with aspects of formal education)

Divergent thinking is characteristic of the creative person. Particularly manipulation of the visual image accompanying ETV as

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inherent abilities of the symbol systems of TV offers a treasure of enriching programme possibilities - inevitably one is reminded of the success achieved in the USA with "Sesame Street" where the full capacity of television as a medium was used to present stimulating viewing matter.

(14) Language (in the fields of formal, non-formal and informal education)

Radio and television are particularly suitable for language teaching. Not only can the listening skills of pupils and students be improved, but subject contents relating to knowledge of the country can also be presented on television. In view of the shortage of language teachers in Southern Africa, radio and television cannot only assist in the inculcation of certain language skills, but can also help to bridge problems of educational provision.

There is a great shortage of teachers of English (HSRC 1981: 64). This applies especially to White and Coloured education. Black education has a drastic shortage of both English and Afrikaans teachers. There is also a shortage of teachers of Black languages at White primary schools, while in certain regions there is a shortage of teachers of modern European languages such as French and German.

An important factor in the teaching of languages is that mother tongue speakers are universally regarded as the ideal, in fact even as an essential requirement. "In the South African context this ideal is realized only in the case of Afrikaans at Afrikaans-medium schools and Black languages at Black schools, and in a fair percentage of cases of Afrikaans as second language at English-medium schools in White education, or English as first language at Black schools" (HSRC 1981: 64-65). Scarce teaching skills can be utilized over the radio or on television. For learning a Black language as a third language by White pupils at the primary level the two broadcasting media can be used to very good

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effect. This also applies to European languages such as French and German.

Communication and understanding in the work situation can be promoted if, for example, supervisors can speak a Black language.

At the formal, non-formal and informal educational level the broadcasting media can help to place language teaching and language attitude on a healthy basis. Knowledge of applicable technical terminology can be positively promoted at the non-formal educational level.

(15) School readiness (mainly in the fields of informal and formal education)

One of the most pressing problems in the educational setup in the RSA is the lack of school readiness which is a precondition for successful school education. The high failure and dropout rate of Black pupils in particular and of Coloured and Indian pupils to a lesser extent can also largely be attributed to this. Many pupils have simply not been exposed to sufficient learning experiences during their preschool years, such as the basic skill of distinguishing between different colours, distinguishing between left and right and knowing how to hold a pen. Furthermore: a high percentage of these children grow up in environments where they do not get enough concrete experience of science and technology, which have to serve as the basis for their mastery of subjects such as Mathematics and Science which are presented in an abstract manner at school.

This boils down to an inadequate family situation for school preparation - a deficient learning climate at home as a result of factors such as poverty, illiterate parents and/or deficient school readiness on account of inadequate exposure to learning experiences, which has to be clearly distinguished from a lack of school maturity, which is more concerned with biological and intellectual factors. Lack of school readiness results in thousands of pupils starting their first school year without being adequately

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prepared for the new world opened up by the school.

The consequent high failure and dropout rates do not only result in large financial and manpower potential losses, but also rob the individual of his worth.

This learning need should therefore enjoy the highest possible priority, particularly with regard to the Black and Coloured population groups.

(16) General literacy (mainly in the fields of informal and non-formal education)

Nowadays reference is made to various kinds of literacy - some of which will be referred to elsewhere in this chapter. Here we are specifically concerned with general literacy, in other words the ability to read and write, which is certainly one of the most basic requirements for taking part and surviving in modern Western society. As with the other learning needs, general literacy should not be considered in isolation and the need for it not be satisfied in isolation. All education is aimed at man as a whole and teaching people only to read and write will lead to imbalanced results. The need for general literacy is part of the overall need for maturity and the desire to be a cultivated person.

The urgency of this need is clear from the testimony of Dr R.H. Lee before the Science Committee of the President's Council. He testified that four million people in the RSA above the age of 19 years old had received no formal education and that an additional 3,8 million had been educated for seven years (Std 5 level) or less. His conclusion was that there were still eight million people (58% of the total population of above 18 years old) who were not fully literate.

If we assume that everyone who did not successfully complete Grade One/Sub A is illiterate, then it means that 175 000 people (of all population groups together) annually leave school while still totally illiterate (Research Institute for Educational Planning, UOFS).

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Every year an additional approximately 160 000 people enter society as semiliterates (Std 2 at most) and 125 000 are (basically) literate (having obtained Std 3-5) (Research Institute for Educational Planning, UOFS). Despite the phenomenal growth in the number of teaching opportunities the problem of illiteracy is increasing in the RSA, as also elsewhere in the world. Although the percentage decreases in proportion to the total population growth, the actual figures are still rising.

This leads to vast problems such as

- increased alienation and even conflict between illiterate parents and school-going children, with serious social implications, and
- an inability to check the ever-growing manpower shortage. Millions of workers have to be provided by a section of society of which a large part is still not adequately literate.

For this reason it is of the greatest importance that basic literacy among adults should be promoted much more than is presently the case.

(17) Parent training (mainly in the field of informal education)

In future the parent will clearly play a more significant role in education and he/she will have to be trained to do so.

The proposed greater parent involvement and meaningful partnership between the parent and the teaching profession is a new concept. For the sake of active participation and effective parental authority, parents in all the population groups will have to be guided, and radio and television can again play a meaningful role in this regard.

However in certain quarters there is also an urgent need for a more favourable and a more stimulating educational setting at home - something which is particularly important for successful school training. Environmental deprivation not only causes defective school readiness (Par. 2.3.2 (15)), but it may also prove to be an impairing factor throughout the school career of the child.

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There are also social-demographic and economic factors such as urbanization, housing problems, poverty and commuter and migratory labour. Other impairing environmental factors include those relating to training and education such as inadequate language proficiency, lack of a specific concept structure in the mother tongue, foreign language as the medium of instruction, low educational level of parents and defective communication between parent and child. Furthermore there are also cultural factors such as the tradition-oriented culture of many Black people in contrast to the Western technology-oriented culture.

The majority of these factors are virtually unalterable, but parents can nevertheless receive guidance on how to minimize their impairing effect.

(18) Rural development needs (mainly in the field of informal education)

If a learning need points to a very basic need which has to be satisfied for the sake of survival, there is an urgent need in the rural areas particularly among the Black population for guidance regarding matters such as improved farming activities, manual dexterity, agriculturally related cottage industries and craftsmanship.

(19) Health and welfare needs (mainly in the field of informal education)

National health and social welfare constitute a general need of all population groups and people of all ages. In order to satisfy this need, ongoing guidance and education extending beyond the formal education system and including a wide variety of matters are required:

- environmental health
- healthy eating habits
- mother and child care
- healthy way of life
- physical and mental disability
- institutional and foster care for children
- occupational safety

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Radio and television can very successfully be employed in a planned manner to promote the general physical and social welfare of everyone.

(20) Retraining and continuing training (mainly in the fields of formal and non-formal education)

In a world of rapid change - particularly in the field of technology - retraining will be increasingly important in the professional world. Initial training for a specific occupation which is not followed up by refresher courses or further training will not always be adequate in future. Retraining and in-service training will be essential particularly because of the numerous occupations that will be made redundant by the introduction of the computer. ER and ETV can create the appropriate climate to prepare people for this and can play a role in the training of large groups of people.

(21) Management training (mainly in the field of non-formal education)

Management training and the training of supervisors will have to be attended to, so as not to handicap the continued economic growth that has to be effected. As other population groups also take their place in the provision of high-level manpower, the management skills of staff from all the population groups will also have to receive attention.

(22) Labour relations (mainly in the field of non-formal education)

Healthy relations between management and employee and between management and trade unions are essential for stability and sustained progress in the field of labour. This also includes understanding of the acculturation problems of the Black people who, with a rural background, have to enter the industrial world of sophisticated technology.

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(23) Cottage industries (in the field of informal education)

Initiatives of this nature form part of the informal sector of the economy. Small entrepreneurs supply indispensable services in the communities where they operate and this constitutes the first entry to the free-market system.

The job opportunities that are created in this way and the self-sufficiency of these entrepreneurs are of fundamental importance. Media such as radio and television can help bring these people the management skills, the bookkeeping skills and the subject contents that will help to assure the success of small businesses.

(24) Communication (in the field of informal education)

Involved here is the ability to communicate in the context of the family, the school, the career and leisure activities. This skill can be improved by making people aware of the components of and possible interferences in the communication process.

(25) Defence/Civil defence (in the field of informal education)

If the individual is made aware of his place in these services in society it can to a great extent contribute to preparedness of the population in the face of insecurity, crisis and violence. Urban terrorism and the large number of road accidents again focus attention on the need for participation in civil defence services.

(26) Do-it-yourself techniques (in the field of informal education)

In view of the cost of living and the cost of the supply of services there is a growing need to master these techniques.

(27) Civil affairs (in the field of informal education)

Radio and television can create an understanding of the role and responsibilities of the citizen with regard to local and central authority.

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(28) Retrieval of information (in the field of informal education)

Southern Africa has entered the "era of information" in which the computer plays an important role. The storing and retrieval of information via a computer keyboard will become more and more common in future.

(29) Race relations (in the field of informal education)

In a multiracial situation such as in Southern Africa the communication media can do much to form positive attitudes and create mutual respect for the philosophy and way of life of the different population groups.

(30) Legal procedures (in the field of informal education)

In view of the complexity of the law and the cost of legal representation today, the individual is becoming aware of the need to know how the law affects him in his everyday life.

When buying property or being involved in a motorcar accident which entails insurance claims, the layman often encounters obscure legal procedures that can be explained to him by means of the media.

(31) High school of the air (in the field of formal education)

Provision of education of this nature will satisfy a major need of the Black population group. If no entrance requirements are set, a high school of the air will help to bridge the gap between basic literacy and secondary education and help the individual to obtain a school leaving or matriculation certificate.

2.4 A RATIONALE FOR THE USE OF ER AND ETV TO SATISFY IDENTIFIED LEARNING NEEDS

Experience obtained elsewhere in the world and research indicate that the utilization of a medium such as television holds a number of advantages for educational broadcasts. ETV not only offers the possibility of reaching

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a large number of people within a very short time, but also makes it possible to use the best facilities and teachers/trainers in cases where there is a shortage of staff in certain subject fields.

Schramm (1977: 170/171) points also to the following advantages that will accompany the introduction of ETV:

(i) The range of educational television and the logistic requirements that ETV sets, compel a commitment to change and facilitate additional changes in education.

(ii) A medium such as television places a schedule on change. A decision to start broadcast on a certain date requires timely curriculum revision, timely arrangements regarding financing, timely professional training prior to the use of the equipment, training of teachers to use the medium and timely preparation and provision of classroom guides and other supporting material.

(iii) The dramatic nature of television attracts wide interest and can symbolize change and "modernization" for a broad target group.

(iv) The enthusiasm for the use of television sometimes causes people taking part to undertake tasks which they would normally have been hesitant to undertake.

(v) Television captures the attention of pupils who consider the introduction of educational television as something new in an old routine.

(vi) Television facilitates the obtaining of financial resources from outside.

(vii) A medium such as television may be a catalyst for other changes in the provision of education and the consequent effect can be just as significant in this regard as the direct learning effect.

The experience of other countries has taught us that there are certain matters that have to be taken into account in the use of radio and television for educational broadcasts:

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(i) According to Schramm (1979: 194', the ideal medium for use as a supplement to classroom education is the medium over which the teacher has maximum control. Taping television programmes on video tape, whether in school or by the broadcasting institution providing this service, introduces a flexibility in the use of programmes and solves by itself the scheduling problems arising in education.

(ii) The use of radio and television requires co-ordination of all aspects of the provision of education, from curriculation and production facilities, to use in industry, at school or at home. The cost factor for the co-ordinated provision of education at the formal, non-formal and informal educational levels is much more favourable than that for piecework programmes.

(iii) The broadcasting media should promote equal and uniform standards of education provision for all the population groups.

(iv) The available training manpower should be used within the total range of radio and television.

(v) The broadcasting media should accelerate the tempo of change - new ideas and curricula can rapidly be introduced in education.

(vi) Television is part of modern technology and as such enjoys the interest of a large number of people. Mass media of this nature usually display this type of demanding/absorbing nature.

(vii) In order to use the media in a total strategy of national development it is essential to have teleclubs. The educational value of a programme is enhanced if the programme is the theme of a group discussion after the group has listened to a particular radio broadcast. In India it was consequently decided to establish teleclubs for the purposes of the project on adult education. Rural radio forums and teleclubs indicate that discussions in the context of organized listening or viewing groups promote a sense of participation among the people and lead to better results.

(viii) From the experience of UNESCO it is evident that a broadcasting organization should not operate in isolation to produce successful broadcasts. A network of specialists should be established for the production of programmes. The use of radio and television as resources in education demands that the broadcasting media be considered an

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integral part of educational planning and administration at every level. Use of radio and television in education should form part of teacher training and the in-service training of teachers. Teachers can on a large scale be trained as well as retrained with the aid of radio and television programmes - the quality of education will improve and a larger part of the community will be reached.

(ix) Experience elsewhere has taught that adequate and reliable reception has to be guaranteed to ensure the success of educational broadcasts. A second important point is that programme production has to be of very high quality. There must also be collaboration between the broadcasting corporation and local educational departments as well as other training institutions to really produce effective educational programmes.

(x) The relationship between the teaching authorities and the broadcasting corporation should be clearly spelt out prior to the introduction of an educational programme service.

(xi) Transmission and reception facilities should be such that at least 75% of the schools or institutions concerned will have good reception.

(xii) There should be adequate funds and other resources available to ensure that the potential of the medium, whether it is radio or television, is used to the full.

(xiii) The use of television is more effective when distinctive concepts and educational practices are established for this medium. The mere duplication of existing lessons is a waste of money and time. The best use of this medium follows the introduction of institutions such as a university of the air, a technikon of the air or high school of the air. Experience elsewhere has shown that the target groups of these types of broadcasts grow in numbers. People at various levels of society experience a need for more knowledge as a result of developments in technology and science.

2.5 SUMMARY

(i) The provision of education in Southern Africa is complicated by the fact that the educational needs of the different population groups

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diverge. Some educational needs are typical of those experienced by people in the First World (the developed industrial countries) and others are again characteristic of the Third World (the developing countries).

(ii) A differentiated approach to the learning needs of the different population groups in Southern Africa is a basic requisite.

(iii) Learning needs should be considered in the context of education as a whole. Education implies the continuing assistance rendered by an adult as the educator to a maturing educand to bring about the latter's maturation in the expectation that the assistance will lead to adulthood. (Van Zyl 1975: 122, 146). As far as learning needs are concerned, it is also necessary to remember that the adult is also still developing (Van Zyl 1975: 122), which implies that man will continuously develop new learning needs.

(iv) The idea that the provision of education should meet the learning needs of the learner is central to the concept of "basic education"; the provision of education has to be learner-centred. This conceptual framework includes various elements (Sachsenmeier 1977: 74/75; Sachsenmeier 1978: 161):

- community orientation of education;
- integration of formal, non-formal and informal learning which constitutes a lifelong process of learning;
- the urgency for learners to obtain practical skills - therefore the approach is very functional;
- various target groups are involved, and
- bridging of the subject orientation of traditional syllabi and curricula.

(v) The learning need approach implies the following with regard to curriculation:

- planners of curricula should concentrate on learning needs;
- curriculum development should be integratedso that the provision of education can occur at the formal, non-formal and informal educational levels;

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- a lifelong broad strategy and structure of education provision should be developed, taking into account the process of identification of learning needs, the control of the curriculum and its evaluation at the national, regional and local level, and the allocation of responsibilities and limitations at every level;
- there is a need for a new approach in the training of teachers and the definition of the role and function of the teacher should be adopted accordingly;
- planning of the teaching contents of education as well as of the methods used in the teaching-learning process should accommodate a number of alternative patterns, and
- examination systems for formal education should reflect identified learning needs.

(vi) Basic education is particularly relevant in the context of the Third World, where the provision of a minimum education is essential for the effective participation of the masses in productive life in society.

(vii) There is an increasing awareness of the supporting role of education in development. If education can be based on well-defined learning needs, the odds are that it will become more effective.

(viii) The following definition of learning needs will suffice:

A learning need represents the knowledge, attitudes and skills required by an individual in order to take part adequately in the life of a particular society. Because of the tempo of change in society learning needs are of a dynamic nature since new learning needs that have to be satisfied, arise continuously. Learning needs also display a differentiated character: on the one hand they are the product of local circumstances and specific target groups, and on the other hand they are a basic necessity to certain groups, to other groups they are substitutes for or complementary to formal education, and to yet other target groups they are merely of an enriching nature.

(ix) Within a single society one can distinguish between learning needs on macro, meso and microlevel. For the purposes of Southern Africa, learning needs at the macrolevel can be seen as learning needs that

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can generally be satisfied on a national scale. The learning needs at mesolevel should be seen in a regional context and those at microlevel as the needs of a local community or a local group of schools or related industries/training fields.

(x) Learning needs should be considered in terms of a continuum extending from the universal as one pole to the particular as the other pole. By universal learning needs is meant that the learner will have an intellectual, skills,value and religious grip on reality. Basic learning needs include (Müller 1981: 34/35):

- Basic ability to read, write and calculate.
- Basic knowledge of fundamental scientific concepts for a basic understanding of hygiene, health, nutrition, cultivation of the soil, stockbreeding and economies.
- Practical knowledge and skills to make a living and support a family (which may include larger and smaller family units) and a household.
- The ability to take part in community life and to understand the nature of society, for example its history and image of itself, the duties and tasks of government and administration, taxation, social security, co-operatives and self-help movements.
- The development of the individual's ability to think critically and encourage him to create his own world and to take an active part in the development process.

Particular learning needs are more differentiated in terms of learning needs and fields. These can be learning needs concerning hobbies and interests, and as far as subject contents are concerned, they can include topics like environment studies.

(xi) A specific target group is often not aware of the fact that it lacks knowledge that will in future be necessary. This situation may arise as a result of rapid technological progress or may be due to something being outside its field of experience or thought. Consequently it is often essential to create the context for learning needs.

(xii) Any system of provision of education cannot only function from the macrolevel to the microlevel. Feedback from the local level has to be maintained and learning needs at this level should be considered

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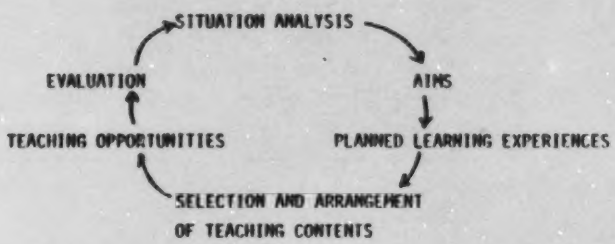
from the very start. Owing to the influence of technology the tempo of change is very quick. Learning needs change rapidly because they undergo a shift in emphasis or because new learning needs come to the fore. It must therefore be emphasized that the learning needs that were identified in the interim report are the learning needs that currently exist. They may change within a short time, which makes feedback and follow-up work essential if the provision of education is not to be anachronistic.

(xiii) In the presentation of educational programmes for the radio or television provision is made for the design and the development of curricula in the decisions regarding learning needs and subject contents. The following planning, feedback and evaluation cycle with criterion and diagnostic characteristics is recommended:



(xiv) Identified learning needs within the context of Southern Africa:
Both in educational research and in discussions with educationalists, business and community leaders, numerous learning needs have over the past years been identified - some of course more urgent than others.

The learning needs are not arranged in order of priority and the field of provision in which each of the needs falls is merely a first indication:

- Technical literacy (mainly in the field of informal education)
- Change of attitude with regard to technical occupations (mainly in the field of informal education but also touching on formal education)

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- Computer awareness and literacy (including aspects of informal, non-formal and formal education)
- Teacher training (mainly in the field of formal education)
- Training of training specialists (in the field of non-formal education)
- School guidance and career guidance (mainly in the field of formal education but also touching on aspects of non-formal and informal education)
- Learning needs in the context of formal education
- Social responsibility and community involvement (forming of attitudes can occur in the fields of formal, non-formal and informal education)
- Economic responsibility (mainly in the field of informal education)
- Learning needs of gifted and handicapped pupils (in the field of formal, non-formal and informal education)
- Road safety (mainly in the fields of informal and formal education with possible aspects of non-formal education)
- Free-market system (in the fields of formal, non-formal and informal education)
- Development of divergent (lateral, creative) thinking (mainly in the field of informal education with aspects of formal education)
- Language (in the fields of formal, non-formal and informal education)
- School readiness (mainly in the fields of informal and formal education)
- General literacy (mainly in the fields of informal and non-formal education)
- Parent training (mainly in the field of informal education)
- Rural development needs (mainly in the field of informal education)
- Health and welfare needs (mainly in the field of informal education)
- Retraining and ongoing training (mainly in the fields of formal and non-formal education)
- Management training (mainly in the field of non-formal education)
- Labour relations (mainly in the field of non-formal education)
- Cottage industries (in the field of informal education)
- Communication (in the field of informal education)

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- Defence/Civil defence (in the field of informal education)
- Do-it-yourself techniques (in the field of informal education)
- Civil affairs (in the field of informal education)
- Retrieval of information (in the field of informal education)
- Race relations (in the field of informal education)
- Legal procedure (in the field of informal education)
- High school of the air (in the field of formal education)

(xv) From a rationale for the use of ER and ETV to satisfy identified learning needs, it appears that the introduction of ETV holds a number of advantages:

- a large number of people can be reached within a short time;
- the best facilities and teachers/trainers can be used in cases where there is a shortage of staff in certain subject fields;
- the introduction of ETV demands a commitment to change;
- a medium such as television places a schedule on change;
- the dramatic nature of television elicits wide interest;
- enthusiasm for the use of television stimulates initiative and a spirit of enterprise;
- pupils experience ETV as something new in an old routine;
- television facilitates the obtaining of financial resources from outside, and
- a medium such as television can be a catalyst for other changes in the provision of education.

To make the most of these advantages certain things have to be taken into account in the use of the radio and television for educational broadcasts:

- the ideal medium for use as a supplement to classroom education is the medium over which the teacher has maximum control; there will thus be a need to tape programmes on video tape or video cassettes;
- use of the radio and television requires the co-ordination of all aspects of the provision of education (curriculation, production facilities and use at school or at home);
- use of broadcasting media should promote equal and uniform standards of education provision for all the population groups in the

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country;

- the range of radio and television can bring about the optimal use of available training manpower;
- new ideas and curricula can be rapidly introduced in education with the help of the broadcasting media;
- television is part of modern technology and attracts the attention of a large number of people;
- teleclubs are essential in the use of media in a total strategy of national development;
- from the experience of UNESCO it is clear that in order to produce successful broadcasts, a broadcasting corporation should not operate in isolation;
- in order to guarantee the success of educational broadcasts, experience elsewhere has taught that reliable reception is essential. Programme production must also be of high quality;
- the relationship between the educational authorities and the broadcasting corporation should be clearly stipulated prior to the introduction of an educational service;
- funds and resources should be such that the potential of radio and television can be fully realized, and
- the use of television is more effective when distinctive concepts and educational practices are established for this medium.

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CHAPTER 3

THE USE OF RADIO AND TELEVISION FOR EDUCATIONAL PURPOSES IN A NUMBER OF COUNTRIES

3.1 INTRODUCTION

In other parts of the world - and this applies to both developed and developing countries - radio and television have already for some time been used in the broadcasting of educational programmes.

Projects of this nature vary from informal programmes aimed at enriching the listener or viewer in general to formal and non-formal programmes aimed at

(i) assisting school children in their normal learning situation in the school context;

(ii) training teachers in service to fulfil their teaching role more effectively;

(iii) assisting those outside the school context to obtain school-leaving qualifications through correspondence;

(iv) keeping workers in industry informed of new trends in their particular fields of work;

(v) enabling listeners and/or viewers to obtain further qualifications on a part-time basis at a tertiary or advanced technical level by means of projects such as University of the Air.

The situation regarding educational radio and television in certain countries of the world will now be considered.

It is obviously not possible to include all situations where these media are used in education and training. The criteria set for the inclusion of those countries that will be dealt with, include the following:

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(i) Particularly with regard to the developed countries, but also in the case of developing areas, it was important that the media had to have been used for educational purposes for some time in the country, in order to be able to evaluate their value over a relatively long period;

(ii) Examples had to be taken from the First as well as the Third World, since the demands that will be made in the local situation if these media are used here, will include aspects of both the First and the Third World;

(iii) Projects containing examples of formal, non-formal and informal situations had to be included in order to ensure as complete an image as possible of the situation elsewhere.

3.2 EDUCATIONAL BROADCASTS IN A NUMBER OF FOREIGN COUNTRIES

3.2.1 Britain

(1) General

"Education has been part of broadcasting in the United Kingdom ever since 1922 when the British Broadcasting Company was formed" (BBC 1980/81: 1).

In Britain the BBC, as well as the Independent Broadcasting Association, is particularly active in the fields of formal, informal and non-formal education.

(2) Formal education

In Britain school broadcasts are undertaken by radio as well as television. As far as radio is concerned, special attention is given to programmes on music, drama, English, modern languages, religious instruction, history, geography, science and career guidance.

In the case of television, the areas arousing "national concern" are those mainly concentrated on, as well as those where television can make the best contribution. Subjects such as English, general linguistics, literature, mathematics and particularly science and career guidance receive attention.

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As far as radio is concerned, school broadcast and other educational broadcasts were introduced as far back as 1924. However, broadcasts for adult education petered out during the thirties and were only resumed in 1954.

Television started with formal broadcasts for schools in 1952 and for adults in 1963. The Open University project was launched in 1969.

School television covers most of the subject fields of the curriculum. However, emphasis is placed on those subjects arousing national concern and where it is felt that television can make the best contribution. Consequently English Language, literature and literacy programmes took up approximately 25% of the total air time for school television during 1980/81. About the same amount of time was dedicated to mathematics programmes.

According to the BBC (1980/81: 4) television can also be very useful in subject fields such as geography, environmental studies, European studies and modern languages. Such series of programmes are supported by publications aimed at both the teacher and the pupil. School television programmes are broadcast daily between 09 h 00 and 12 h 30 and again from 14 h 00 to 15 h 00 during school terms.

School radio programme series include subject fields such as music, drama, English, modern languages, religion, history, geography, science and career guidance. A programme hardly ever exceeds 15 or 20 minutes and includes programme formats such as drama, documentaries, group discussions and interviews on topical themes. Duplication often occurs between school television and school radio because these media are used in a complementary fashion.

School radio is also supplemented by pamphlets and multimedia packages. The BBC (1980/81: 5) says the following in this regard: "Filmstrips are essential for the radiovision programmes. These are designed to be tape-recorded by the schools and used in conjunc-

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tion with the filmstrips to form a presentation in sound and vision. It has become the practice to include one radiovision programme per term in history, geography, and science series".

School radio programmes are broadcast daily during the school term on Radio 4 BBF from 09 h 00 to 10 h 30, 11 h 00 to 12 h 00 and 14 h 00 to 15 h 00.

The Open University (OU) is a specially developed, academically autonomous, national university in Great Brittain and Northern Ireland. The university was established mainly to provide instruction for adults in their own time and own homes so as to help them obtain a degree or to continue postgraduate study.

The OU has a full-time staff, its own central campus at Milton Keynes and its own council and senate. In July 1969 it obtained the same academic status as any other university in Britain. More than 50 000 students have obtained their degrees at the OU since its first academic year in 1971 and in 1982 the number of students enrolled was approximately 90 000.

The courses are presented within six faculties: arts, educational studies, social sciences, general sciences, technology and mathematics.

Each course is compiled by a course group consisting of academic staff (usually from more than one faculty). BBC producers, a representative of the university's institute for educational technology and different editors and their assistants who liaise with the university's publication and media sections, since the university itself publishes most of its supporting material. The course group accepts full responsibility for the compilation of a complete course. The university's institute for educational technology is responsible for the design of the course, the testing of the course material prior to publication and for the evaluation of the courses. The audiovisual media research group also carries out research projects on the audio and video components of courses.

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In accordance with an agreement between the BBC and the OU, the BBC production centre provides video and audio components for the multi-media courses of the university.

The university publishes a magazine Open Line in which matters of common interest to the university and the BBC are discussed. The target group of this publication is mainly overseas educationalists who want to keep abreast of the academic and broadcasting activities of the OU.

The centre accommodates about 400 full-time members of staff of the BBC (production staff, engineers and staff responsible for television design, graphic design and film). Two hundred and fifty television programmes and video cassettes are produced annually, together with 400 radio programmes and audio cassettes.

The programme producers are all also subject specialists who are well acquainted with the educational aims of the university courses.

In order to liaise closely with the university, the 55 producers are not only skilled as broadcasters, but they are also academically trained as scientists, educationalists and some of them have had experience in lecturing at universities.

The producers at the production centre of the OU concentrate on audio and video components in the programmes since the two can usually be complementary.

The programmes are broadcast on the television channels of the BBC and over the BBC's Radio 3 and 4 VHF (in accordance with the agreements between the BBC and the OU). The university sends cassettes together with other study material directly to students or lends them to students through a videotheque scheme.

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The OU annually produces 130 undergraduate courses and 46 courses for continuing training. The study material for these courses also includes audio and video components. The courses are usually broadcast each year for more or less eight successive years, after which the programmes are either adapted or replaced completely.

Written texts constitute the most important aspect of most courses and the audio and video components are integrated with the course planning in order to obtain an optimal educational effect. The planning of courses takes two years and during this period there is close collaboration between the BBC production centre teams and the course groups of the OU in order to plan the different components.

Television helps to promote the learning process by visual means, for example instructions and demonstrations, case studies and descriptions, etc. The OU programmes make use of various methods of approach - also in single courses. The science faculty usually makes use of television for essential demonstrations in the practical part of the course. Mathematics courses concentrate on animation, graphic material and visual effects to illustrate mathematical concepts.

The television programmes are compiled in such a manner that they for example illustrate the complete text or certain aspects thereof in considerable detail. Study guides show students how to use television programmes in a meaningful way. Students are also enlightened on any preparatory or after-care work concerned in a particular television programme. Students find study material in the form of video cassettes more practical than simply watching a television programme since video tapes can be replayed if a student has difficulty with any part of the programme. Video cassettes are specially used in courses which do not have any registered students. Consequently broadcasting time is used more for the subjects which are more popular among students.

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The use of audio cassettes is also regarded as a valuable method of study. Not only do music, drama and poetry receive attention, but discussion groups and practical advice on how experiments are brought within the reach of students. The price of an ordinary tape recorder makes this type of study material more easily available to the student.

The educational partnership between the OU and the BBC is summarized by the BBC as follows:

"The two national bodies, both working under Royal Charter, one an independent teaching and degree-awarding university,the other a public broadcasting service, are the partners who together have pioneered a system of higher education for adults".

This partnership resulted in a form of tertiary education consisting of four phases:

(i) The systematic study of correspondence text material and prescribed works;
(ii) regular tuning in to television and radio programmes as well as viewing and listening to audiovisual aids;
(iii) contact in order to solve individual problems between students and lecturers as well as advisers which may take place individually or through summer schools for group discussions;
(iv) written assignments and annual written examinations, self-evaluation tests, practical work by means of special rapid study apparatus for home use, use of the university's national information network on computers and other forms of practical project work.

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A formal agreement between the OU and the BBC stipulates that the latter should provide production staff and auxiliary broadcasting services.

With the aid of university staff, BBC specialists who, with the educational aim in mind, are firstly academics and secondly broadcasters, will produce the broadcasting in consultation with the academic staff of the OU. The BBC will broadcast the programmes, where applicable, at the arranged times.

In order to keep its part of the agreement the BBC created, within its framework, a "mirror-image" of the OU's academic setup. Consequently in the BBC a department of psychology is responsible for producing psychology programmes, a department of chemistry for chemistry programmes, etc. in consultation with its academic equivalent in the OU itself. Final decisions on productions, however, rest with the OU.

(3) Non-formal education

With regard to non-formal education the BBC's Section for Adult Education gives special attention to the following:

(i) Literacy training
(ii) Foreign languages, for example Japanese, German, French, Spanish and Italian
(iii) The world of work
(iv) Vocational and in-service training
(v) Programmes for teachers
(vi) Programmes for 16 to 19-year-olds in colleges
(vii) Series on handicapped people and those who live and work with them

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(viii) Programmes in and around the house
(ix) Hobbies and practical skills
(x) Understanding different types of sport and their accompanying skills
(xi) Parent education
(xii) Comprehension of a broader world including the arts
(xiii) Science and technology
(xiv) History and matters of public interest
(xv) Media study
(xvi) Social action programmes

A new development is the institution of two microcomputer courses developed by OU and with target group persons in executive posts of companies, and persons such as engineers and others who are responsible for design and development. The first course is called "Microprocessors and product development: a course for industry" and the second "Microprocessors and product design: a course for engineers". These courses have been on the market for two years now and it is estimated that approximately 5 000 courses have been sold and as many as 20 000 persons in managerial posts have obtained new insight into the new technology. Consequently the OU's methods meet the needs for further professional training at an advanced level in a non-formal manner.

In the BBC's programmes on computer literacy a need arose for software and suitable publications to supplement the programmes. This led to the BBC's having its own microcomputer developed which in large measure contributed to the standardization of software in Britain, while the publications that emerged in the wake of the project currently account for the BBC's best sales.

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(4) Informal education

Informal projects mainly concern programmes on national welfare and general issues of interest to adults.

(5) Air time

The BBC allocates so-called protected time slots (mainly during the day and late evening) to educational programmes. Quality educational programmes can also be scheduled (and this often happens) during the normal broadcasting times of the BBC's entertainment services. As a result educational programmes can be broadcast during peak listening times. In such cases the production costs of the specific programme are to a very great extent covered by the budget of the entertainment services, even though the educational section is responsible for making the programme.

From April 1979 to March 1980 the BBC devoted the following total number of broadcasting hours to the indicated educational programme categories:

School radio	: 774
School television	: 518
"Continuing education": radio:	320
"Continuing education: TV	: 426

Regarding OU broadcasts, during the 1980 academic year 828 radio hours and 1 152 television hours of programme material were broadcast.

The usual length of each programme is 25 minutes, and during an academic year 1 100 and 1 200 hours are broadcast over BBC1 and BBC2 respectively (This number of hours represents 12% of all the programmes that are televised over these channels). Because OU students usually work during the day, the programmes are broadcast

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early in the morning and late at night from Mondays to Fridays. On Saturdays and Sundays the programmes are broadcast early in the morning and early in the afternoon.

The number of broadcasting hours is annually agreed upon by the BBC and the universities. The initial number of four hours a week in 1971 increased to 37 hours a week in 1982. The radio programmes are broadcast over VHF Radio 3 and 4 early in the morning and late at night. Initially 30 hours a week were broadcast over the radio, but as a result of increasing audio cassette distribution currently only 20 hours a week are devoted to radio broadcasts.

In addition there is also the IBA (Independent Broadcasting Authority) in England which lays great stress on educational broadcasts in co-operation with the BBC.

Of paramount importance is that in November 1982 Channel Four was launched, which broadcasts educational programmes ten hours a week.

3.2.2 Germany

(1) General

Germany with its 11 provinces is provided with educational programmes by various of its local stations.

What is striking about the Bayerischer Rundfunk is that programme categories over the whole spectrum of the broadcasting industry are divided into programme types for which the educational service is responsible on the one hand, and programme types for which the entertainment service is responsible on the other hand. News and information constitute a third leg. Where the commercial service of Bayerischer Rundfunk thus entertains, informs and educates, it is the educational service's task to educate and inform and, where necessary, to do so in an entertaining fashion. In this way programme categories such as family programmes and serials, cultural and scientific programmes etc. are the responsibility of

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the educational service in the Bavarian situation, and within the framework of these programme types listeners/viewers are educated formally and non-formally. To this is added the formal leg of educational broadcasts in the form of school television and school radio programmes, as well as the very interesting Telekolleg project.

(2) Formal education

School radio programmes are compiled in collaboration with an advisory board of teachers and planned as many as three years in advance. Adult education takes place at the Volkshochschule for professional workers where television and radio are used, albeit to a limited extent. The Funkkolleg offers special courses lasting for periods of one year. The broadcasting time for children's programmes is 12 hours a week and school radio broadcasts five hours a week.

Educational programmes are also broadcast by Westdeutscher Rundfunk and Südfunk.

Educational programmes of the Bavarian Telekolleg (television) were broadcast for the first time on 2 January 1967. The Telekolleg was introduced with a view to providing continuing education and makes provision for those who do not have intermediate training (the German Mittlere Reife) in commercial and industrial subject fields. The standard that is set is that which is achieved in the Berufsaufbauschule (a school for pupils who have technical qualifications but who also want to improve their academic qualifications) and the Realschule (a secondary school).

The Telekolleg consists of three components: the television programmes, the written study material and group work, and the so-called Kollegtag. The Telekolleg provides instruction in five main subjects: German, English, history, mathematics and physics to which 78 lessons each are devoted. A further six optional subjects with 78 lessons in each subject are also offered. A total number of 467 lessons of 30 minutes each are broadcast over a period of three years.

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The Telekolleg was established as a result of an agreement between the Bavarian Broadcasting Corporation and the State of Bavaria. According to the agreement the responsibility of the Bavarian Broadcasting Corporation is to cover the entire syllabus of the Berufsaufbauschule by means of educational programmes and the written study material. The State of Bavaria makes the schools available and is responsible for the organization of the group work. The marking of assignments and tests as well as the applicable examination is also undertaken by the State.

The initial interest in Telekolleg (Course 1) was high. Approximately 30 000 people evinced an interest in the courses but only 14 500 actually registered for them. The first group work session was attended by 8 500 students and the first examination (after Course 1) was successfully written by 3 700 students.

When Telekolleg (Course II) was planned, the experience gained during Course I was taken into consideration. Participation in Telekolleg is divided into three groups:

Group A: Students who take courses leading to "Mittlere Reife".
Group B: Students who are only interested in certain subjects but who want to take part in group work. The Group B course is made possible by the co-operation of the Volkshochschule, that is evening schools for adults.
Group C: Students who are only interested in the written component of the course but who do not want to take part in group work or write examinations.

A total of 9 500 students registered for the three groups.

Research has revealed that approximately 80% of the students were clerks or manual labourers, that 82% were younger than 35 and that only 21% were women. The lowest participation was by people living in rural areas. The least interest in Telekolleg was shown by people in the agricultural and forestry groups.

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(3) Non-formal education

The Telekolleg programmes are also popular among people who do not participate as students. The Telekolleg has succeeded in bringing about a closer relationship between school and home and is also regarded as enriching the school syllabus. It helps to bring about a quicker application of new scientific and didactic methods in education.

The Telekolleg has already spread to Switzerland and other German states, namely Rheinland-Pfalz, Baden-Württemberg, Saarland and Hesse.

Very interesting facts have emerged through continuing research. It appears for example that a certain period of time must elapse before Telekolleg reaches the target groups concerned. Most of the students live in large cities, and the age of a prospective student determines the course he is going to register for. Students in the age group 15-30 register for the A study course and older persons prefer the B or C courses. Female students do not like examinations and prefer participation without having to write them. The information provided by Telekolleg is used by them merely to extend their general knowledge. Single people participate to a larger extent in courses in Group A than married people. The more children a prospective student has the more likely he/she will participate in Group B or C rather than in Group A.

Since Telekolleg therefore also fulfills an educational function that is not examination oriented, it plays an important role in non-formal education in Germany.

(4) Informal education

Because of the division of programme categories as discussed in 3.2.2 (1), an approach in the German setup has arisen that stresses "casual" and more informal education.

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These programmes, for example documentaries on community affairs, are aimed at the broad education of the general viewer. Their purpose is not to help people obtain qualifications and they do not constitute part of a specific plan of instruction.

(5) Air time

School radio broadcasts are an important part of the German school day.

Bayerischer Rundfunk for example devotes approximately nine hours a week to school radio broadcasts.

As far as TV is concerned, a new syllabus was introduced in Bavaria at the beginning of the 1982 and 1983 school years for the so-called Grundschule. It has been found that through television the new contents of the syllabi can be implemented more easily in the schools.

School television is also broadcast during the school day and is integrated into the daily school routine.

In the new approach programmes are planned around a central theme. Often the child is taken as the theme and the learning material is built around him/her, for example projects such as The child in the community or The child and the history of his country. Such an approach promotes identification with the subject matter.

In the 18 years of school television in the BRF a "pool" of programmes has been built up for rebroadcasting. The programmes are however carefully evaluated on an ongoing basis to determine whether the contents and didactic elements are still topical or whether the programmes need to be partially or completely redone.

This procedure has the effect that about 80% of the material that is broadcast annually consists of rebroadcasted programmes.

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3.2.3 The Netherlands

(1) General

Educational programmes are broadcast by the broadcasting societies. For adult education there is the "Radio Volksuniversiteit" and the Television Academy for Adult Education (TELEAC). The Federation for Educational Radio and Television was established on 1 October 1982. The educational service annually broadcasts 1 000 to 4 000 hours on television and fewer hours over the radio. Advisory councils advise the programme makers on the content of programmes.

(2) Formal education

Radio and television are used to support the Open School by enriching teaching and learning. The Open School is an educational institution whose aim is to improve the training of people with poor academic qualifications who are over 18.

The Open School came into being in 14 different places in the Netherlands in 1977. The interest was so great however that hundreds of spontaneous Open School groups were established.

The courses extend over a period of two years. Two meetings are held weekly and take place during the morning, afternoon or evening. Each meeting lasts three hours. Students must however be prepared to do additional work at home.

Groups of 10-15 students work together in the Open School. Students help each other and also learn from one another. The subject matter is built up around themes. Such themes could be: social insurance, politics, health, the care of the aged, education and training, etc. The members of the group in turn communicate what they learnt about the theme and subject field to the rest of the group. When a theme is worked on, the student must himself look for suitable subject matter, be able to form his own views on the theme and exchange thoughts with the rest of the group. Each group has a permanent

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group leader.

The following subjects are offered: Dutch, English, French, German, Frisian, arithmetic, mathematics, economics, geography, history, physical science and biology. Usefulness in daily life is the criterion when the subject matter is planned. It is for example not only important to be able to spell correctly in Dutch, but such correct spelling must also be applied in the writing of letters.

There are subject teachers for the various subjects. Most students choose two or three subjects to study and then work on them at their own speed - at home too.

The Open School meetings are held as far as possible in the immediate vicinity of the participants. In cities groups are established in various quarters and in rural areas they are established at specific easily accessible points.

At the end of the learning period in the Open School a declaration is drafted and issued to the student. In it the subjects followed are listed as are the themes that were tackled and completed. The final declaration of the Open School allows admission to the second class of the so-called MAVO (Middelbaar Algemeen Voortgeset Onderwijs).

(3) Air time

The transmitters of Hilversum 2 and Hilversum 4 transmit the radio broadcasts for the Open School. Programmes last 30 minutes a unit. The subject matter is broadcast as part of a number of series. All told 60 minutes a week are broadcast jointly over H2 and H4 for the Open School. A further hour from the weekly repetition of the broadcasts is added to the total Open School air time of 120 minutes a week.

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Regarding television, programmes for the Open School are broadcast by Nederland 1 and Nederland 2.

The broadcast of Nederland 1 on Fridays from 18 h 28 to 18 h 58 (30 minutes) are not repeated. However on Sundays Nederland 1 broadcasts a 45 minute programme (14 h 45 - 15 h 30) for the Open School. This programme is repeated on Wednesdays from 14 h 45 to 15 h 30 on Nederland 2. Air time of two hours a week is thus devoted to the support of the Open School syllabus.

3.2.4 Japan

(1) General

Part of the commission contained in the broadcasting licence of the Nippon Hoso Kyokai (NHK) is that the NHK should strive to educate and uplift the Japanese people to meet the challenges of the new civilization as interpreted by the Japanese.

NHK's educational broadcasts aim to do just this. In the execution of its commission NHK demands the following of educational programmes:

(i) The target group of the programmes must be clearly defined and the programme content must be appropriate and beneficial.
(ii) In order to ensure the desired educational result, the programmes must be well organized and of a continuing nature.
(iii) Equal opportunities in education must exist for all.

(2) Formal education

The target group here is all school-going children from the kindergarten child to the high school child. Radio and television programmes for schools include lessons in Japanese, English, science, mathematics, social studies, music, art, physical education, ethics, domestic science and environmental studies.

Since the introduction of school radio broadcasts in 1935, the NHK

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has extended the number of programmes and air hours so that today the so-called Second Network concentrates strongly on such broadcasts. School television was introduced in 1953 when television broadcasts commenced in Japan. In 1959, with the introduction of a television educational service, the NHK extended school television considerably.

Currently the so-called senior high school correspondence course of Japan is also strongly supported by the broadcasting media. In 1965 a NHK investigation revealed that educational programmes should be broadcast from 20 h 00 in order to enable the working learner to tune into the broadcasts.

Subjects such as chemistry, mathematics, English, biology, world history, Japanese history and physics are covered by television for the purposes of correspondence study. Radio broadcasts for these purposes include music, mathematics, English, classical literature, Modern Japanese, geography and world history.

There is thus considerable overlapping in radio and television broadcasts.

Programmes for tertiary education were introduced by the NHK for radio in 1961, and for television in 1965. Broadcasts include courses in the cultural, social and natural sciences and are divided into six series. Each series has a broadcast cycle of six months - 26 programmes of 20 minutes each that are scheduled once a week.

(3) Non-formal education

The so-called cultural broadcasts of the NHK fall under this heading, for example enrichment series covering general history, science, art, etc. which are mainly directed at adults.

Television series include programmes on literature, history and civilization, modern science, modern societal structures and Japanese history. The radio network concentrates on series such as spiritual welfare and classical literature.

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Various non-formal series on agricultural guidance and forestry and fisheries are also broadcast. There are also programmes for businessmen.

(4) Informal education

Particular emphasis is placed on the television and radio broadcasting of general enrichment programmes for the handicapped.

Informal broadcasts are directed at kindergarten children, older children, adolescents and adults with a view to the general education of all these groups in a community context. Other target groups include men specifically and women specifically. For women series such as your menu for today and tips for good housekeeping are planned and broadcast. Programmes on good manners, music appreciation and on important social issues are broadcast for adolescents.

(5) Air time

In 1981 the NHK devoted 52 hours a week to educational broadcasts on its general television network, 125 hours a week on its educational network, 42 hours 19 minutes on Radio 1, 114 hours on Radio 2 and 65 hours on its FM service.

Of the above figures 87 programme series consisted of school radio broadcasts which meant nearly 26 hours of broadcasts a week to schools. In addition the NHK broadcast 127 television programme series for schools, and the total weekly air time for school television broadcasts was roughly 34 hours.

Besides this, broadcasts for correspondence high schools consisted of 23 programme series, the radio broadcasts amounting to 22 hours a week and the television broadcasts to 12 hours a week. In addition six series for tertiary students were broadcast, three hours devoted to television. A further three hours a week were devoted to broadcasts for the disabled, while television and radio respectively set aside five hours and six hours a week for culture enrichment programmes.

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3.2.5 Israel

(1) General

Educational television broadcasts in Israel are the responsibility of the Instructional Television Centre (ITC), which functions independently from the general broadcasting service and operates under the aegis of the Department of Education and Culture.

(2) Formal education

Formal education programmes consist of series. Subject fields such as language and communication, science, geography, history, mathematics, foreign languages, art, music, political science and religious studies are included in the programme series.

A module is

(i) broadcast during the school day and the schools schedule the subject concerned to coincide with the time of the broadcast
(ii) repeated in the afternoons
(iii) repeated annually as long as the contents and presentation are not dated. Some programme modules have been suitable for re-broadcasting for as many as seven years. Modules (or in some cases parts of modules) are replaced when developments in the subject fields or other valid reasons make this necessary.

Schools buy their own tele[illegible] sets except in the case of subsidized schools where such purchases are the responsibility of the Department of Education. This is however, rather the exception than the rule.

(3) Non-formal education

Of great importance here is the teacher training system of the ITC. Selected teachers are trained by the ITC on a regular basis and then sent back to their own communities as seminar leaders at no

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extra remuneration. These teachers thus act as instructors in the use of television broadcasts in their own educational communities.

The Everyman's University Broadcast are mainly directed at non-formal educational projects in various fields and are not aimed at the acquisition of certified qualifications. Extracurricular programmes are meant for the whole community and are predominantly administered for general education purposes in centres for non-formal education such as youth clubs and kibbutz communities.

(4) Informal education

This is seen by the ITC as mainly those programmes for home enrichment aimed at virtually every member of the population. The basic aim is general enrichment in the community context and includes programme series on Judaism and a series on family situations. The latter sets out to provide identification models for behavior for members of the family.

(5) Air time

The educational service that is managed by the ITC is responsible for all broadcasts from 08 h 00 to 17 h 30 daily, while the general television service is responsible for the daily evening broadcasts from 17 h 30.

School television programmes generally last 20 minutes each, while programmes for informal education can last 30 minutes a module. Programme types range from documentaries to dramas.

The daily educational broadcasting pattern is as follows:

(i)	Kindergarten children	:30 minutes
(ii)	Primary school educational programmes	:150 minutes
(iii)	Secondary school educational programmes	:120 minutes

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Thus a daily air time of five hours is devoted to formal broadcasts. A further three hours a day are devoted to non-formal and informal broadcasts within a total educational programme broadcasting format of eight hours a day. In conclusion the ITC's activities as described by the Centre itself (ITC 1981) can be summarized as follows: "The Instructional Television Centre's involvement in this project is in line with the Centre's basic policy guideline: to focus available resources on problem areas by evolving suitable media presentations for the reinforcement of government educational and social programs".

3.2.6 India

(1) General

From 23 December 1960 to 5 May 1961 AIR-UNESCO (1963: 5-44) undertook a very interesting project in India on the use of television as a teaching aid for adults.

AIR (All India Radio) broadcast a series of 20 programmes, each 30 minutes long, every Friday from 19 h 30 to 20 h 00. Programme themes were for example the responsibility of being a citizen in connection with road safety, health, etc.; general civic behaviour; public property and town planning.

The programmes were compiled with a view to providing viewer's with more information influencing viewer's attitudes (where possible), and to promoting group follow-up work, seventy-one groups known as "teleclubs" consisting of lower middle class people in various parts of Delhi and environs watched these programmes. Immediately following a programme the various aspects of the programme were discussed by the club members, and the convenor of the clubs then sent a report to the television division of AIR.

The club members were eager to obtain more information on the subjects covered by the different programmes. The programme makers themselves also obtained more information, while the programmes

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were planned in consultation with experts in the various subjects. By the end of the project it was clear that the question-answer approach at the conclusion of every programme had great education value.

Despite the problems that were sometimes experienced, a lot of knowledge was transferred to the viewers during these programmes particularly because they were not devised as educational programmes as such, "in fact, what the group went through was a slice of a more dynamic, but actual group living experience" (AIR-UNESCO 1963: 5).

"Secondly, though the 'shift' in information might have been more marked, had the tele-clubs included a majority of illiterate people, the group of educated and semi-educated citizens who gained so much in knowledge through these programmes demonstrated a paradox in adult education; adults learn well when they already know something of what is being offered to them; the existence of a base-line both of information and ideas is a help in the process of learning" (AIR-UNESCO 1963: 5) - which emphasizes the importance of publications in the prior dissemination of information.

The programme makers had the benefit of receiving regular weekly feedback from the viewers during the project, which is exceptional in broadcasting. "The members of the production team went out of their way to understand the requirements and targets of the project" (AIR-UNESCO 1963: 6), although they had a very small production centre. In India, as in other developing countries, the ideas of programme makers are based on the television production for developed countries. "This makes them sometimes oblivious to the requirements of a society whose needs are different and more straight-forward" (AIR-UNESCO 1963: 6) which in turn emphasizes the vital importance of continuing programme research.

AIR's project has shown that this problem can be overcome "by inviting producers and technicians to become fellow-educationists and treating them as such" (AIR-UNESCO 1963: 6). It is further felt that

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"these programmes open up the possibilities for a new genre films: that is, the short feature-cum-documentary, which has a story and characters, which gives information and states problems and which can be produced at much lower cost than the films produced at large professional studios" (AIR-UNESCO 1963: 6).

However the programmes were not intended as entertainment. During the five months that the project lasted, members of the teleclub began to regard television as primarily a serious medium. They gathered around television set not only to watch the programme but also to engage in lively discussion after the programme. "And how can one have a discussion, they would ask, if the programme has no substance in it? Such a programme might be all right for children and invalids, but not for adult citizens" (AIR-UNESCO 1963: 6), which once again underlines the great importance of continuing research.

What this project revealed was that "through planned effort a serious-minded and knowledge-thirsty audience can be built up..... it is however, relevant to remember that this result could not have been achieved only by the actual broadcasts, but that it was a product of the entire process, namely organized viewing, planned programmes, earnest and serious discussions and the reporting and notice taking of those discussions. Programmes in themselves are not education, nor can they even be said to have a powerful impact. Programmes followed by discussions are the real power" (AIR-UNESCO 1963: 6-7).

(2) The media in national development

The Indian project clearly illustrates the central importance of so-called teleclubs in the application of the media in a total strategy of national development.

These "listening in groups" to radio broadcasts was a characteristic of the listening pattern of India during the first 25 years of AIR's existence. UNESCO (1965) undertook a further study in India entitled

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"An experiment in farm radio forums" which revealed that the educational value of a programme increases when it initiates group discussion. Consequently it was decided to establish teleclubs at the inception of the project on instruction for adults.

To start off with a brochure on teleclubs was compiled in which questions such as "what is a teleclub" were answered.

A teleclub consists of about 20 members who watch television programmes together with the aim of gaining knowledge that can be applied in daily life. These clubs are autonomous - they are not groups instituted by the Government. They are also not meant for those looking only for pleasure and entertainment.

A teleclub is a kind of informal adult education centre. The instruction takes place in two ways. Firstly the programme must be watched and secondly there must be participation in the discussion after the programme. The members can then themselves decide whether the programme ideas should be tried out in practice, in other words whether follow-up work should be done.

The television sets were made available by UNESCO to various departments, for example the Social Education Department of the Delhi State. These departments thus helped with the establishment of the teleclubs.

The brochure also gives additional practical tips on the formation of teleclubs.

The selection of the members was the responsibility of the convenor. His task was to bring together men and women with similar backgrounds and needs. In other words he had to get to know the environment and the people and secure their co-operation. The criteria for membership were that the members had to be adults and they had to have an occupation. Large age differences between members were not desirable.

Even personalities were taken into consideration; for example people very rigid in outlook were not suitable as members, neither were those who did not give others an opportunity to express their views, and neither those who were cynical and overcritical.

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The most important characteristics for members were therefore experience of life, the ability to think clearly, verbal expression ability and the desire to implement new ideas. High academic qualifications were not a recommendation.

The organizer then invited more than 20 suitable prospective members to a meeting at which the convenor and chairman were selected. A register was begun and each member received a pin-on badge.

The convenor had to be a developed person as reports had to be sent to AIR on a regular weekly basis. A bulletin also had to be sent and this and the other organizational work had to be done on a voluntary basis. He was however reimbursed for money spent on stationery etc.

The chairman had to take the initiative at meetings. He did not have to be erudite but he had to be respected, keep to his word and be amenable to new ideas.

The discussions were evaluated on the basis of

- knowledge gained,
- the attitude of members to the theme,
- possible follow-up work.

In working out a new system for educational broadcasts, the Indian project can be profitably looked at as well as the finding that "the role of television in social education therefore, appears to be to broadcast programmes which are entertaining and which also meet the need for popular education. Success in this field will thus depend upon the skill with which high entertainment value and popular educational content can be combined" (AIR-UNESCO 1963: 38).

As far as radio is concerned, a project was also launched by UNESCO (1965) in Poona which operated on the same principle as the teleclubs, namely a club with 15 to 20 members, who on an organized basis listened to selected radio programmes, discussed the programmes so as

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to increase their knowledge and then did follow-up work by implementing certain of the ideas in action programmes. Such a radio club "is a kind of social education centre, whose members wish voluntarily and without fanfare to expand the horizons of their knowledge, to become better citizens and to express themselves freely, but with restraint and politeness on their day-on-day problems. In other words, a radio rural forum is a listening-cum-discussion-cum-action group of villagers" (UNESCO 1965: 14). The format of a radio rural forum programme was briefly as follows:

- signature tune
- answers to questions put by forums (clubs) and reports on action programmes from forums
- the content of the programme
- signature tune

The length of the programmes varied from 30 to 34 minutes, depending on the incoming correspondence that had to be dealt with in the programme.

Attempts were also made to answer all [illegible], and if there was insufficient time for this during the programme then this was done by post.

What clearly emerged from [illegible] project was that target groups reacted differently to programme content. It was found that in rural areas programmes containing interviews with for example farmers elicited more interest than programmes containing a talk on farming.

Furthermore "a feature on Palm Jaggery (Parm Gur) using four voices and some bridge music was fairly competently written to appeal to a normal urban audience and it conveyed a good deal of information on the importance of Palm Jaggery in India's rural economy. But when the scriptwriter/producer went to a village to listen to his own production with the village audience, he noticed that after the first three or four minutes the interest of the forum flagged and they

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looked frankly bored. On being questioned at the end of the programme they complained that it was confusing; the many voices baffled them and the musical bridges irritated them because they were faded out just as they were beginning to be interesting" (UNESCO 1965: 23).

During the UNESCO project in Poona it was found that women generally did not want to be members of listening clubs together with men. Some clubs held separate discussions for men and women. All then established special women's clubs but the functions of these clubs were not wide in range. "Rural Children's Listening Clubs" were also established but not on a large scale.

Action programmes soon followed the broadcasts.

- In Gundlapochampalli (Hyderabad) an evening school was started, with the convenor of the radio club as the teacher. The first step was to teach basic literacy to all members of the club who could not read or write. Eventually 125 inhabitants of the town could write their names instead of merely making finger marks.
- Kadipur (Gijarat): Most members of the "Youth Clubs" listened to the radio rural forum programmes. After a programme on "Village volunteer forces" responsibility for the town's security was taken over by club members who protected the crops against stray cattle. The community voted 2 000 rupees a year to maintain this surveillance.
- Otala (Punjab): 12 club members took out insurance policies after a programme on life insurance.
- Jawarai (Gujarat): After a programme on a new type of cotton the convenor himself planted some of this cotton which yielded a good crop. Subsequently other club members did the same and also realized good crops.
- Mathasahi (Puri, Orissa): Following a programme on banana farming members of the radio forum started a banana plantation with 4 000 trees.

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There are many other examples of the educational influence of these programmes where provision was made for additional visual material.

An investigation was undertaken in Uttar Pradesh by the Planning Research Action Institute. Lucknow (UNESCO 1965: 28) describes it as follows: "Our total Rural Forum Programme has a considerable degree of potential in motivating village folk with respect to knowledge, attitudes and actual application in practice, but the programme in the field still has to develop an organizational structure in which a number of physical factors must be successful".

The Osmania University team which conducted a study on the forums in Audrha State, said: "It is an excellent medium. The forum should be recognized as a new way of educating villagers" (UNESCO 1965: 28).

3.2.7 Asia

(1) General

UNESCO (1967: 31-50) gives a detailed description of the educational broadcasts in Asia.

The number of hours that are devoted to educational broadcasts in Asia are reflected in Tables 3.1, 3.2 and 3.3.

(2) National development and the media in Asia

UNESCO (1965: 41) states that "development is the key-note to the countries of Asia, even though they have reached varying stages from insufficiently developed countries up to highly developed societies. In general, Asian countries face serious problems created by low levels of national income and consumption, inadequate productivity, under-development of education, high rates of illiteracy, low standards of health and a general apathy of the people who are poorly motivated".

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Experience has also taught that the human factor is of overriding importance for any development. When productivity is not increased, financial investments are wasted. Only an "educational effort of immense dimensions which can be tackled only by a new technology in education and the employment of all available resources" will possibly boost productivity (UNESCO 1965: 41).

Furthermore: "for the success of any social and economic development scheme, communication between the planners, their agents and the people is of the utmost importance". The use of radio and television as educational media "requires that they are integrated at all three levels of planning, production and reception, with the general educational structure of the society in which they operate" (UNESCO 1965: 41).

If a national development campaign is to bear fruit then radio and television ought to be part of the country's basic facilities and "with investment in education, broadcasting resources should be expected to yield results in the form of an informed, motivated and skilled people, leading to the increased availability of productive manpower whether in urban or rural areas" (UNESCO 1965: 42).

For programmes to be effective they must be planned and implemented in such a way that they lead to a change in people's attitudes; they must also lead to their accepting change and help so that they can gain the skills needed for development and progress. "Evidence of the rural radio forums organized in India and rural teleclubs organized in Japan, show that any programme that leads to discussion in organized listening or viewing groups in rural areas, is able to instil a sense of participation among the people leading to more fruitful results" (UNESCO 1965: 42).

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TABLE 3.1

EXTENT OF RADIO BROADCASTS IN CERTAIN COUNTRIES (EDUCATIONAL PROGRAMMES)

LAND	Total broadcasting hours a week (local)	Educational programmes (hours a week)	National development programmes (hours a week)	PERCENTAGE FORMAL BROADCASTS					
				Preschool	Primary lessons	Secondary lessons	Guidance	Teacher training	University broadcasts
Burma	75.15	2.40	3.10			25	28		
Ceylon (Sri Lanka)	245.50*	46			11	45.5		11	3.5
China	273	70			10	30	5	2	10
India		639				10	5	1	1
Japan	410			1	12	20	1		8
Laos	63	6			50				
Mongolia	147	31		4.5	8	6.4	3.7	5.9	3.7
Pakistan	770	93	350	1		92			4.5
Thailand		41			43	18		7	

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TABLE 3.2

EXTENT OF RADIO BROADCASTS IN CERTAIN COUNTRIES (CONTINUED)

LAND	ADULT EDUCATION PERCENTAGE OF EDUCATIONAL PROGRAMMES				
	RURAL DEVELOPMENT	HEALTH AND HYGIENE	LITERACY PROGRAMMES	COMMUNITY DEVELOPMENT	POPULAR SCIENTIFIC
Burma	32	8		37	23
Ceylon (Sri Lanka)	11	2	5	3.5	7.5
China		5	2.5	5	5
India	55	10		10	15
Japan	10	5		22	20
Laos	10	10	15	10	5
Mongolia	24.1	1.6		3.2	12.9
Pakistan	46.3	10.5		10.5	10.5
Thailand		1	6	10	15

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TABLE 3.3

EXTENT OF RADIO BROADCASTS IN CERTAIN COUNTRIES (EDUCATIONAL PROGRAMMES)

LAND	Total broadcasting time in hours a week	Total educational and developmental programmes (hours a week)	PERCENTAGE OF EDUCATIONAL PROGRAMMES School programmes					Outside school programmes			
			Preschool	Primary lessons	Secondary lessons	Occupational guidance	University	Rural development	Health and hygiene	Literacy programmes	Community development	Popular scientific
India	23	16			66				7		17	10
Japan (NHK)	252	112	10	15	20	3	1	5	1		25	15
Malaysia	28	13			40			30	8	3	8	10
Pakistan	770	440	.03		11.8		.55	6.1	1.3		1.3	1.3
Thailand	112*	1½*		33	33						33	

*) Hours per month

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For rural people in particular, attempts will have to be made to broadcast programmes that have a bearing on all aspects of their daily life, that will engage their whole personality. They must for example not be addressed as farm workers, illiterates, et al. so that they can begin to see themselves as part of a greater whole.

"In the exercise of its multifarious functions in regard to development, a broadcasting organization cannot and should not be in isolation if it wants to be effective" (UNESCO 1965: 43). A co-operative network of specialists should be established to produce effective programmes.

"The use of radio and television as a resource of education, requires that they be conceived as an integral part of educational planning and administration at every level" (UNESCO 1965: 43). When the great potential of radio and television as educational aids is considered, it should be clear that instruction in the use thereof should form part of teacher training and in-service training. Teachers should be trained and retrained on a large scale through the medium of radio and television. In this way the quality of instruction can be improved and a larger section of the community reached.

In Asia there is a growing demand for higher education for people who do not have the means to attend ordinary educational institutions. It is suggested that a university-type educational programme should be compiled. Pilot projects should be undertaken in collaboration with education departments. The results of these projects should be carefully evaluated so that a basis for further expansion can be established. In order to ensure continual progress in the use of the mass media for teaching purposes, "it is recommended that a systematic programme of research, including action research in all aspects of the application of mass media to education, should be undertaken by universities, education ministries and broadcasting organizations. The programme of research should cover areas such as development of suitable tests, assessment of the relative efficacy of different techniques of programming and teaching through mass media, cost factors, problems of the integration of the curriculum

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in the broadcasting techniques and its adaption to the varying levels of audience ability and aptitude" (UNESCO 1965: 45).

Most people in Asia have to learn much more, more quickly than other people in order to stay abreast of the tremendous periods of development that characterize modern life. "For this continuous process of lifelong education, radio and television are valuable tools in the hands of educators and development planners" (UNESCO 1965: 45).

The attainment of literacy ought to be a priority goal in all the countries of Asia. "Although radio may be the direct means for the teaching of literacy, there are important advantages to be achieved by radio in this field. It should be extensively used to mobilize public opinion so that it may show energy in eradicating illiteracy, to attract voluntary workers for the field, and to motivate individual and group learning" (UNESCO 1965: 45).

Television also holds various possibilities for the teaching of literacy.

To achieve the greatest possible effectiveness, programmes should be supplemented with suitable publications.

Educational radio and television broadcasts should be used in such a way that they motivate people to work efficiently and productively.

Programmes on history and geography make everyday life interesting and cause listeners and viewers to be more conscious of their environment. Educational programmes with social themes increase understanding of political and government institutions and result in a greater emphasis on the individual's role in and empathy towards systems and a strengthening of his self-confidence. Popular science programmes, documentary programmes, etc. stimulate interest, which is essential for the assimilation of new ideas. Broadcasts form part of the most isolated households and can therefore motivate women to contribute optimally to community and national activities;

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they can also be better equipped for the role of mother and home maker. Programmes on health, child care and family planning can be directed at women as the target group.

Radio and television programmes should fulfil a threefold function for women:

(i) To improve their home life;
(ii) to give them ample opportunity to learn about local, national and international events, and
(iii) to provide entertainment and thus alleviate the monotony of an isolated existence.

It is also suggested that programmes should be listened to in groups and that there should be discussions afterwards.

Young people in rural areas should be encouraged to participate to a larger extent in agricultural production and other productive activities such as instruction in literacy. They should be socially educated and ought to participate in community life.

Job-seeking youths who move from the countryside to the cities "have problems of adjustment in a new, often bewildering, environment. The planning of a broadcast service to these people has to be correlated with other welfare activities and with vocational education programmes like the workers education scheme and youth welfare work in many countries".

"Here, again, group listening and viewing could be profitably utilized for motivation and action. Television, where available, should also be used for improving the skills of such people" (UNESCO 1965: 46).

UNESCO (1965: 48) proposes that educational programme broadcasts "should be systematically evaluated to determine their effectiveness, and the findings should be used to overcome weaknesses, exploit strenghts and improve standards of performance".

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3.2.8 Pakistan

(1) General

Rafe-uz-zaman (1981: 117) reports as follows: "Pakistan is now running out of time to eradicate her huge backlog of illiteracy with its massive annual increase. At independence, with a population of about 30 million, we had about 17 million illiterate people over the age of nine. Now in 1981, with a population of about 84 million, we have an illiterate population, again only counting those over the age of nine, of no less than 45 million - nearly treble the number of 34 years ago". If the necessary steps are not taken to eradicate illiteracy in Pakistan this figure will again double in the following 30 years. The dropout figure for pupils is as high as 40-50% and it will not change while the illiteracy of parents persists.

He goes on to say: "there is still time to avoid facing such a situation ten years hence, through an appropriately massive investment in literacy and adult education".

In August 1973 the Educational Television Section proposed a pilot project "to make adults functionally literate with the help of television".

(2) Literacy programmes in developing countries

The aim of the project was to devise a way of reducing illiteracy over a period of seven to ten years. The project aimed at making 24 000 adults (half of them women) functionally literate at 200 group centres in the Punjab. This would be done by means of a course of 156 television lessons compiled in collaboration with the Adult Functional Literacy Teachers. Each of these cvc (community viewing centres) recruited 60 men and 60 women for separate viewing sessions. UNICEF made 220 000 dollars available to cover the bulk of the costs.

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The project was preceded by an intensive teacher training course consisting of 21 telelessons which began on 21 October 1975 and ended on 30 April 1976. Each 30 minute lesson was broadcast twice a day except on Fridays - for women in the afternoons and for men at night. The lessons were compiled by the Pakistan Television Corporation in collaboration with the ABES (Adult Basic Education Society), Gujranwala. The results of the project were very encouraging - 16 000 people in the target group became literate. At the same time between 113 000 and 195 000 children, who were not involved in the project, improved their ability to read and write through the television programmes. The pass figure for men and women in the AFL (Adult Functional Literacy) tests in reading, writing, arithmetic, health guidance, budgeting and saving, child care and family planning and basic agricultural practices was a highly satisfactory 90-96%.

The problems that were experienced were mainly delays in the distribution of publications to the group centres, power failures, television sets that broke and occasionally were not quickly repaired and delays in the payment of teachers. Rafe-uz-zaman (1981: 118) continues: "it has thus been demonstrated that the tele-lessons for Adult Functional Literacy, including the component of teacher-training, provide an effective and viable instrument which, if properly used, would make it possible to mount an expanding and successful campaign to eradicate illiteracy, to provide basic elements of adult education, particularly in the social sectors listed in the report, and also to improve the reading and writing skills of primary school-age children".

A follow-up research project was conducted two years after this project and the reading and writing ability of 537 women and 477 men in the Lahore and Rawalpindi divisions, who had become literate with the help of the television course, was investigated. It was found that only 50% of these people continually used their new skills, mainly to do calculations or to write letters. Twenty per cent taught one or more children to read and write and 2% felt that apart from becoming literate they had learnt about other subjects.

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"There is obviously a need to find means of motivating more adults to use their acquired skills; but even with only 50 to 65 percent of the former students showing themselves to be active, we may expect accelerating socioeconomic progress and an improvement in the quality of life. Thus out of the modest estimate of 120 000 adults made literate through the first pilot project, we should now leave 60 000 to 80 000 active, newly literate men and women" (Rafe-uz-zaman 1981: 119).

In 1978 the Adult Education Directorate in collaboration with the Ministry of Education's Third Education Project jointly announced that they were prepared to proceed with the project. The AFL course was revised and 165 000 to 196 000 adults acquired basic literacy through these television programmes.

The general conclusion was that despite certain organizational shortcomings during the five-year period in which the AFL course was offered, 426 000 women and 269 000 men acquired basic literacy at a cost of Rs 9.11 per person. It is calculated that through the course and with the aid of 10 000 CVC's 800 000 men and women can be taught basic literacy annually. By only following the television programmes a further 200 000 people can become literate at a cost of Rs 48 million. In the meantime the project is continuing with the support of the education department in Pakistan.

3.2.9 A number of African countries

(1) General

The Ivory Coast has introduced on a large scale an educational technological system in its primary schools. Since 1971 television has been used in most primary schools as well as in a large number of rural districts where it would otherwise not have been available for many years. The Evaluation Unit was therefore established "to monitor the growth of the primary and out-of-school systems" (Seya and Yao 1977: 1).

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(2) The effect of the broadcasting media in Africa

As far as the media are concerned it appears that radio is still preferred by the majority of the people. But "unlike the rural areas in other third world countries, however, television has come to play an increasing role in the media habits of village dwellers" (Seya and Yao 1977: 26).

Regarding the programmes on housing, the Evaluation Unit found that "The adaptation of traditional housing to modern life where both Western and local values are harmonically combined seems to be the most popular attitude of TVE viewers" (Seya and Yao 1977: 52).

Although these investigations were conducted into radio and television programmes it was not exclusively educational programmes that constituted the study material.

Katz and Wedell (1978: 41) have the following to say about the Third World: "Time and again in our country studies we have come across broadcasting systems that on paper look comprehensive and effective, but a single spot check, whether of production, transmission or reception facilities has shown the systems to be seriously defective. For this reason all statistics on broadcasting in the Third World should be treated with caution".

Initially the BBC and American broadcasting structures were copied, but as a result of political instability "broadcasting has been adjusted to fit the less politically stable conditions of Africa" (Katz and Wedell 1978: 42).

Only educational broadcasts in the Third World have "in the last two decades come to be most closely identified in the nation-building process" (Katz and Wedell 1978: 119). Various projects on educational broadcasts, financed by institutions such as UNESCO and the World Bank, have been undertaken. "Most of the extensive educational broadcasting of this kind is intended for reception in the home, rather than in context of organized listening or viewing

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groups. It requires little or no preparation on the part of the viewer, and it proceeds without multimedia support".

Katz and Wedell continue: "In country after country reports indicate that brave hopes pinned on the results of the introduction of educational broadcasting have been disappointed, for two main reasons. The first is the problem of ensuring adequate and reliable reception. The second reason for the disappointing results in many places where educational broadcasting of an intensive kind has been launched is poor program production". Furthermore there is not the desired level of co-operation between the broadcasting corporation and the local education departments, which has an inhibiting effect on educational programmes. Other sectors of the community are being increasingly involved in the education process and "the traditional predominance of school-based educators is threatened". In such situations "a ministry of education finds itself on the defensive and lacking in enthusiasm for greater sharing of responsibility for educational matters with anyone else".

Katz and Wedell (1978: 119) maintain that before any educational programme service is established, the following criteria should be met:

(i) "The relationships of educational and broadcasting expertise should be clearly established;

(ii) transmission and reception conditions should be such that at least 75 percent of the schools or institutions affected are capable of a good standard reception;

(iii) adequate funds and other resources should be available to ensure that the potentialities of the medium, be it radio or television, are fully exploited".

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3.2.10 Russia

In Russia (USSR-Television Centre, Moscow), according to Arnsey and Dahl (1973: 90), there are four television channels. Channel 3, the educational channel, broadcasts both formal and informal educational programmes for schools and adults. A variety of programmes are aimed at adult education. Programmes for professional people deal with the latest developments in the different subject fields. The health authorities for example expect doctors to watch these programmes, and certificates are issued for achievements obtained.

In this way teachers are kept informed of changes in the syllabus. Engineers and managers are encouraged to apply the knowledge they derive from the programmes and they are accorded recognition for the progress they make.

On Sundays The People's University broadcasts a programme of 45 minutes in which workers, farmers and others are given information on national issues and events. Literacy instruction programmes and programmes on agriculture are also broadcast. Broadcasts to schools take place daily between 10 h 00 and 13 h 00. The programmes are each 25 minutes long and are integrated with the syllabi. After 18 h 00 special programmes for students are broadcast, covering subjects such as mathematics, chemistry, physics and mechanics. Some courses are offered only on television. Many viewers are registered students at correspondence colleges which combine television and correspondence material.

Educational programmes are also broadcast from Leningrad by NCPI (North-west Correspondence Polythenic Institute).

In the field of education as much use as possible is made of technological aids - which are not intended to replace teachers. Roughly 300 programmes a year are devoted to educational broadcasts. The aim of these programmes is to raise productivity and strengthen the economy.

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3.2.11 Poland

UNESCO (1973: 71) came to the conclusion, on the basis of an investigation conducted in Poland on the use of television for the technical training of workers, that the best application of television for tertiary education is to create new concepts and educational practices specific to the medium. Merely to duplicate existing lessons is a waste of time and money, and television lessons in themselves are not satisfactory educational material. An institution such as Radio and Television University for School Teachers makes the very best use of the medium. An interesting finding that emerged from this investigation is that the target groups for whom the courses were broadcast, increased in size. Throughout society there is a desire for more knowledge that is stimulated by developments in technical and scientific fields. The mass media must therefore make provision for the satisfaction of this need.

3.2.12 Conclusion

The extent of television's influence on education is not yet completely clear to education planners. A change in attitude is essential for the satisfactory application of this medium in education.

3.3 SOME IMPORTANT CONSIDERATIONS IN THE INTRODUCTION OF AN EFFECTIVE EDUCATIONAL BROADCASTING SERVICE

3.3.1 The partnership between the broadcasting organization and the users

Everywhere overseas where ER and ETV are used optimally for the benefit of education and training, there is a fine balance between the broadcasting organization on the one hand and the users on the other. The fundamental nature of this balance for the success of educational broadcasts is strikingly described by Barrett (1977: 39):

"However, where essential functions are performed by more than one organization, as in the case of educational broadcasting systems which depend on both the Ministry of Education (for content) and the Ministry of Information (for facilities), co-ordination must be built in at every

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point of contact. If satisfactory co-ordination between separate bodies cannot be achieved, then obviously it would be better to reorganize all the processes into a single integrated system with its own facilities".

3.3.2 The broadcasting alliance between radio and television in respect of educational programmes

As Hancock (1971: 64) has shown, it is increasingly being found that radio and television as entertainment and information media are in the execution of their respective broadcasting functions tending to move away from one another. This means that these media are increasingly fulfilling their functions separately.

The approach in the educational application of media represents a totally different viewpoint, primarily founded in the didactics that makes the alliance between radio and television one of the most important cornerstones of an educational service. "It is far better for educational broadcasting to be seen as a single entity; and once multi-media approaches are adopted, the separation of radio and television becomes completely impracticable" (Hancock 1971: 64).

According to the School Broadcasting Council in Britain (BBC 1978: 5) ".....school radio and television are complementary, not competitive". The Council also says that certain lessons (e.g. language lessons) can be put across better on radio and others (e.g. mathematics) better on television. Consequently planners will have to determine how best to use television and radio jointly and separately in education.

3.3.3 The necessity of continuing research

Co-ordinated research is necessary to maintain continuous two-way communication between the communicator (the educational service) and the target group (the viewers or listeners for whom the programme concerned is intended). This research is indispensable for effective communication as it furnishes answers to questions such as the following:

(i) Who is the target group?

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(ii) What are the needs of the target group with regard to certain educational matters?

(iii) How does the target group experience the message of the communicator?

(iv) What is the reaction to the communication?

(v) What role should television and what role should radio play in the transfer of the knowledge at issue? Other questions are also important: To which of the two media is the target group concerned primarily exposed in the case of certain information? What approach in respect of television and radio respectively is desirable for effective communication? How and when should the media supplement each other and when is it desirable to use only one of them to get a specific message across?

This function is therefore largely one of effective feedback. It is very important to realize that in their supplementary roles these media will often have to be used jointly and often separately.

As emerged time and again from the literature study, research sections are found in almost all overseas departments for educational broadcasts and the role they play is a vital one.

One of the most serious shortcomings in the present school radio broadcasts in South Africa is in fact deficient feedback. No matter what is said about this matter, deficiencies in the school radio service can often be traced to this cause.

The value of reporting back is primarily that it will ensure the continued effective functioning of the work committee.

The basic idea is that research should never be done in isolation: it should form part of the immediate academic culture (the department of educational broadcasts). If the research section is not an integral part of the department that organizes the broadcasts the subjective feeling for the value of the applied research will be lacking - with serious

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consequences. Elsewhere such a research section will indeed never be run/managed as anything other than an integral part of the applied activities of the broadcasting department.

The research section carries out its research in collaboration with universities and other research institutions, to whom larger research projects are contracted out. The research should however be initiated and coordinated by the section itself within the educational broadcasting service.

In Britain, Israel and Germany these internal research sections are supported in the execution of their duties by universities, research institutes, etc.

Publications and research are likewise of primary importance. Publications are handled by a consortium of publishers. Research, in collaboration with research institutions, has been undertaken uninterruptedly since 1963 by ZDF (Zentralinstitut) in Germany. The research deals with the effect of educational programmes on the members of the respective target groups.

In Third World countries in particular research is virtually always done on broadcasting projects. Rafe-uz-zaman (1981: 118) for example reports on the comprehensive continuing research that followed the literacy programmes in Pakistan. The intention was inter alia to determine the effect of the programmes and the application thereof in the community.

In Britian the Evaluation and Research Division of the BBC (1980/81: 16) does continuing research within the educational service per se on for example target sizes and listening patterns in respect of school lessons broadcast and on determining needs within the framework of education. It has already been found that these results influence syllabi and not syllabi the broadcasting setup.

Researchers also play an important role in the selection of specialists who can be involved in the planning of educational broadcasting projects for radio and television. The ITC (1981) in Israel describes the role

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of research and evaluation in this situation as follows: ".....it assists in adapting content and media to the specific needs of the target audience and ascertains whether the objectives are being achieved. On a more general level, R & E provides an overall picture of the viewing habits of the Centre's audience, studies the integration of ITC projects into the national school system and gauges their effect on the adult population as well. Evaluation services include: formative evaluation, summative evaluation and viewing and utilization surveys".

3.3.4 Publications and other supporting media

Publications and other supporting media such as transparencies, slides, audio cassettes, etc. constitute, after research, the second supporting leg of virtually every educational broadcasting service in the world.

The BBC (1980/81: 1-2) indicates that two main kinds of supporting publications for an educational broadcasting service can be distinguished:

(i) Textbooks which are essential media for linking syllabus-oriented information with the broadcasting material. Such textbooks are important in school language lessons, literacy projects for adults and even for educating union members with respect to the principles of trade unionism. These publications form the foundation for homework and preparation to listen to or view broadcasts.

(ii) Publications which supply the viewer or listener with the background material needed to help him effectively assimilate the broadcasting subject matter. These publications provide information that cannot be covered by the broadcasts, recommendations for follow-up study, illustrations and statistics.

The Institut für Film und Bild (FWU) in Germany, a production centre that was established to manufacture educational programmes for all the German broadcasting stations, also provides supporting publications and other media for broadcasts. During 1979 FWU (1981: 2) made the following aids available for broadcasts:

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- 71 slide series
- 31 transparency series
- 1 sound slide series
- 37 audio cassette recordings
- 112 16 mm sound films
- 41 8 mm film series without sound
- 16 8 mm film series with magnetic sound
- 23 video cassette series
- 2 multimedia packages

All these media are accompanied by explanatory printed material consisting of charts, brochures and worksheets. In addition the target group for each series is indicated and elucidatory technical information is supplied for teachers and project leaders explaining the educational goals of the series concerned; information on the content of the programmes, directions for use and source references are also included.

Programme catalogues are supplied to enable users to choose educational material that is suited to their needs - a very important factor in Germany with its 11 states (Länder) in which educational needs and syllabi often differ. These catalogues are also supplemented with regular circulars which provide additional relevant information.

In Israel the largest single supplier of educational publications is the ITC. The recipients of publications and other media are not only pupils but also teachers and trainers.

FWU puts it this way against the background of the German situation: "One of the institute's major objectives is endowing the teachers with knowledge of and experience in the appropriate use of audiovisual media in education....."

Publications are also of the greatest importance in the optimalization of programme effect, and the BBC's School Broadcasting Council (1981: 7) sees the matter as follows: "During the 1960's and early 1970's the BBC offered on a non-profit making basis a wide range of publications to accompany broadcasts, including teacher's notes, pupil's pamphlets,

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kits, work sheets and work books for pupils, filmstrips for radiovision programmes, film loops, wall pictures, and tapes..... In 1977-78 some 400 separate items were published to accompany the broadcast. Highest priority is given to the teacher's notes which are written or edited by the producer and are his direct means of communication with the teacher. They provide the essential advance information teachers need to select programmes, to plan classroom preparation, and to foresee possible inquiries and activities the broadcast may stimulate... The pupil's pamphlets are illustrated with photographs, drawings, maps, etc. and add an important visual element to radio broadcasts. The other effective method of providing visual material integrated with radio is through radiovision (a radio broadcast for schools to tape record for use with the colour filmstrip and radiovision notes)".

However in the case of television emphasis falls more on material directed at the teacher as the user of the programmes.

During 1982 more than 1,5 million explanatory books about continuing education were sold by the BBC (1983: 5).

Regarding the Oper University, this service is liberally supported with publications, video and audio cassettes and other audiovisual media (BBC 1982).

3.3.5 The necessity of following a modus operandi in programme planning that is well founded from an education and training point of view

The basic premise here is that programme planning for educational radio (ER) and television (ETV) differs radically from that for general radio and television - indeed to such an extent that Hancock (1971: 64) can show that a producer for educational programmes cannot function as a producer in a general broadcasting service and vice versa.

As far as the modus operandi is concerned, specialists from the academic and educational world are involved in the planning of educational programmes on an organized basis.

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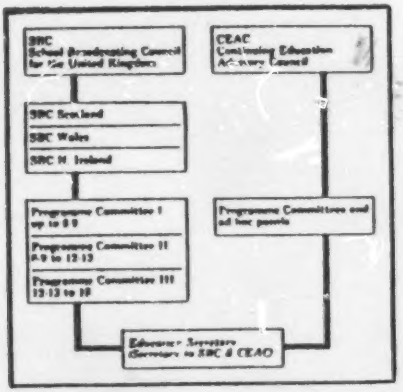
In Britain for example work committees consisting of specialists in programme planning form an integral part of the management structure of the educational service. A further characteristic of the educational broadcasts in Britain are the Educational Councils. The structure is as follows (BBC 1980/81: 9):



"The Educational Councils are autonomous bodies with their own staffs, who represent the world of education at all levels" (BBC 1980/81: 2).

These Education Councils function in collaboration with the staff responsible for educational programmes of the BBC, and the various activities in connection with school broadcasts are carried out by programme committees consisting of senior teachers, advisers and ordinary teachers.

Broadcasts for adults are planned in collaboration with various departments concerned with further study and in particular with specialists in the field of adult education.

The publication and research components constitute an integral part of the management structure of the broadcasting service responsible for educational programmes. The planning of publications and other supporting material as well as the planning of research and evaluation takes

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place in the department itself and often in work committees at the same time as the discussion of the projects on which the research and evaluation planning has a bearing.

The function of the so-called School Broadcasting Council (see flow chart on p.83) is to monitor educational practices and trends at schools and to determine how they can be supplemented by broadcasts. The Council then formulates the educational policy of schools and defines the objectives and scope of each programme series. The Council consists of full time professional staff in the employ of the BBC. Its activities are financed by the BBC.

In the formulation of programme policy, the Council is assisted by three programme committees, ".....(related to the three distinctive age groups) which consist mainly of teachers invited because of their known ability and interest in educational broadcasting, with representatives from the Department of Education and Science, the local education authorities and other bodies" (BBC 1978: 12).

These work committees are involved in the working out of individual programme projects for the various age groups in the formal education setup. In contrast the Council determines overall educational broadcasting policy and sees to it that the programme series in toto fits in with the laid down education strategy.

Most members of the programme committees are senior teachers although class teachers and educational advisers are also included. The three age target groups in respect of pupils are:

(i) the 8 to 9-year-olds;
(ii) those from 8 and 9 years to 12 and 13 years;
(iii) those from 12 and 13 years to 18 years, in the school context.

The work of the Institute is summed up as follows by a brochure of the latter:

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"The FWU produces audio-visual media (av-media) solely for the diverse areas of education. Educationalists with special experience in the field of media didactics as well as specialized further training attend to the productions. Throughout the planning, production and testing of the media, the FWU educationalists work in close collaboration with subject specialists, didacticians, teachers and media specialists. The curricula of the Länder serve as a basis for planning programmes in the various subject areas. The programmes for extra-curricular education and teacher training are planned and produced in close collaboration with the institutions concerned" (FWU 1981: 4).

A similar work committee approach is followed in countries such as Israel, Japan, Germany, the Netherlands, Belgium and Russia.

3.4 Copyright

Copyright has a special significance in the case of educational broadcasts because

(i) recordings are often kept for periods as long as 7 to 10 years and they are regularly broadcast each year;

(ii) schools and other institutions may find it necessary to record radio and television broadcasts as they are being broadcast so that pupils (or students) can for study purposes relisten to lessons or lectures or rewatch them;

(iii) a cassette service may develop from radio and television programmes, especially for use in areas where one or more of the media are not received.

In Britain recordings (only of educational programmes) are allowed and "....may be made in any educational institution in the area of a local education authority which has obtained an annual licence from the Independent Television Association (ITVA). Recordings may be kept for three years and may be used in any educational institution within the authority's area. The licence is renewable each year from 1st September, regardless of when it was taken out. The token licence fee remains £5" (ITV 1980: 30).

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The same principle governs video cassette recordings of the Open University's television broadcasts.

IBA (1983: 31) defines an educational programme for these purposes as follows: "....'educational programmes' are those series endorsed as 'educational' by the IBA's Educational Advisory Council. These normally include all programmes for schools and colleges listed in the ITV for Schools and Colleges Annual Programme together with those adult series approved and designated as 'educational'....."

Similar provision will also be necessary in the case of possible future educational broadcasts in South Africa.

The importance of this is emphasized by the fact that nine out of ten times when a programme is watched in Britain, it is watched as a cassette recording (from the air) and not as a direct broadcast.

3.5 DIFFERENT MODELS OF CONTROL IN OTHER PARTS OF THE WORLD

3.5.1 General

From a study of the literature and a tour of various overseas countries by a study group of the SABC's Educational Services, it appears that the following broad models for educational broadcasting services are used in other countries:

(i) A setup where the educational broadcasts are run exclusively by the authorities and the general broadcasting service has no say in them, for example, in Israel where the educational service is run by the Instructional Television Centre on behalf of the Minister of Education and Culture;

(ii) A setup where the country's broadcasting service is responsible for educational broadcasts and where all the television programme categories are divided between a general service and an educational service with the directive that those categories allocated to the educational service should be run in such a way that they in the

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first place educate and inform and in the second place entertain, for example the Bayerischer Rundfunk in Germany.

(iii) A setup in which a separate educational service is established alongside existing programme services and where to a lesser or greater extent the two compete with each other, for example the BBC model in Britain.

Each of the above models will now be discussed in greater detail.

3.5.2 The authorities-controlled model

(1) General

For the purposes of this discussion the educational broadcasting service of Israel is used as an example. Here the use of the transmitters is divided in such a way that the broadcasting service for educational programmes, which constitutes a separate leg under the Ministry of Education and Culture, is responsible for transmissions from 08 h 00 to 17 h 30 each day.

For the purpose on the one hand of running formal and on the other hand non-formal and informal broadcasts of an educational nature, the Ministry of Education and Culture established the Instructional Television Centre (ITC).

The ITC is headed by a director-general who is directly responsible to the Minister of Education and Culture. Eight hours a day of educational broadcasts on television have to be organized by the Centre.

The total staff of the ITC numbers about 300 - mainly academics and other educationalists.

The personnel structure and management categories are as follows:

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(2) The critical performance areas of the various directorates

(a) The director-general

On the one hand the director-general serves as a link with the ministry concerned and on the other he controls the administrative and financial side of the broadcasting service and sees to it that education policy is carried out within the prescribed political framework.

(b) Director: Programmes

The directorate is responsible for a five year master plan that is drawn up in the ITC. The master plan identifies the broadcasting priorities of the educational service.

In addition the directorate carries out its predetermined tasks through the extension of programmes for adults. These programmes are mainly informal and are aimed at the broad education of the general public.

The target groups for these broadcasts are the general public per se, professional people such as doctors and those who have to keep abreast of rapid technological changes, and students of the so-called Everyman's University.

In the execution of projects, plans for each year, aimed at systematic goal achievement, are worked out and implemented - all within the overall five year plan. Such projects are carried out in close collaboration with other directorates of the ITC, for example Production, School Broadcasts and Research and Evaluation.

(c) Director: School Broadcasts

The main aim of this directorate is to ensure that the school syllabus is properly covered in school broadcasts. In the exe-

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cution of its task the directorate pays primary attention to the preparation and presentation of supporting material such as publications, slides and other aids.

In addition the directorate sends broadcasting schedules to schools, organizes workshops and seminars and sees to it that the necessary teacher training in the use of television as a teaching aid is given.

(d) Director: Technical

This directorate provides technical personnel, facilities and a maintenance service.

(e) Director: Research and Evaluation

The directorate helps with the development of a responsible presentation of programme content and with the development of aids in the broadcasting of programmes. It also evaluates on an ongoing basis the effect of broadcasts in terms of the original objectives. The viewing habits of all television viewers are also evaluated.

Research and evaluation material form the basis of the feedback that helps to ensure that the programmes are as effective as possible with regard to the intended target group.

(f) Director: Personnel and Administration

This directorate's functions cover all aspects of personnel management, the control of buildings, offices and equipment, and security.

(g) Director: Production

The directorate handles all aspects of physical production, including animation, graphic and other art-oriented services.

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film services, studio recordings, wardrobe, make-up, theatrical services and special effects. The scheduling of recordings and the maintenance of an archive of film material also count among its responsibilities.

3.5.3 The national network-controlled model

This mode, which in Europe is best exemplified by the broadcasting situation in Germany, constitutes an integral part of the general broadcasting services.

The Bayerischer Rundfunk in Munich is possibly the best representative of this type of setup. Here the various programme categories, for example drama, documentary, magazine, preschool, child and youth programmes, are divided between the entertainment-oriented and the education-oriented departments. At top management level in this German broadcasting organization it was decided that categories such as documentary, drama, preschool, child and youth programmes and religious broadcasts should be the responsibility of the Education Department. In contrast to the approach of the entertainment-oriented programmes where the directive is to entertain, inform and educate, the directive to the education oriented programmes is exactly the opposite, namely to educate, inform and entertain. The approach therefore is based on a different emphasis in terms of the point of departure.

The broadcasting structure in the case of the Bayerischer Rundfunk is as follows: a director-general for radio and television and under him five directors responsible for television, radio, administration, technical services and legal administration respectively.

The Deputy-Director: Television Education is responsible for the so-called Familienfunk (family programmes), Jugendfunk (youth programmes), Kinderfunk (children's programmes), Kirchenfunk (religious programmes), Schulfunk (school programmes) and Bildungspolitik (political development)

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in respect of radio, and Familie und Schule (family and school programmes), Erziehung und Erwachsenenbildung (education and adult education), Kultur und Naturwissenchaften (culture and natural science) and Dokumentationen, Programmentwicklungen und Sonderprogramme (documentary and special programmes) in respect of television.

Programme planning is done by special work committees consisting of subject specialists, school inspectors, teachers, et al.

3.5.4 A relatively independent unit as part of a national broadcasting service

The classical example here is the BBC model.

In the case of the BBC "(t)he overall control and supervision of this operation is in the hands of the Controller. Educational Broadcasting and the Head of Educational Broadcasting Services who between them form the CEB Unit" (BBC 1980/81: 2).

In a pamphlet this organizational structure is illustrated schematically (see Table 3.4).

The Controller is responsible for five production sections. For radio and television there are separate sections that manufacture programmes for school broadcasts. The Controller: Educational Broadcasting is as chief executive officer of educational broadcasting directly responsible to the Director-General of the BBC. He is primarily responsible for the broad planning of programmes, for the budget and for personnel affairs. Continuing education is also his responsibility as far as programme policy is concerned. He and the Secretary of Education work closely together on school broadcasts. He is the chairman of a number of permanent management committees and he keeps in close touch with the national regions, local radio, BBC publications and enterprises and various local and overseas education representatives. He also has the responsibility of maintaining contact with specialists in the education field and similar specialists in the employ of the IBA (Independent Broadcasting Association) and ITV (Independent Television).

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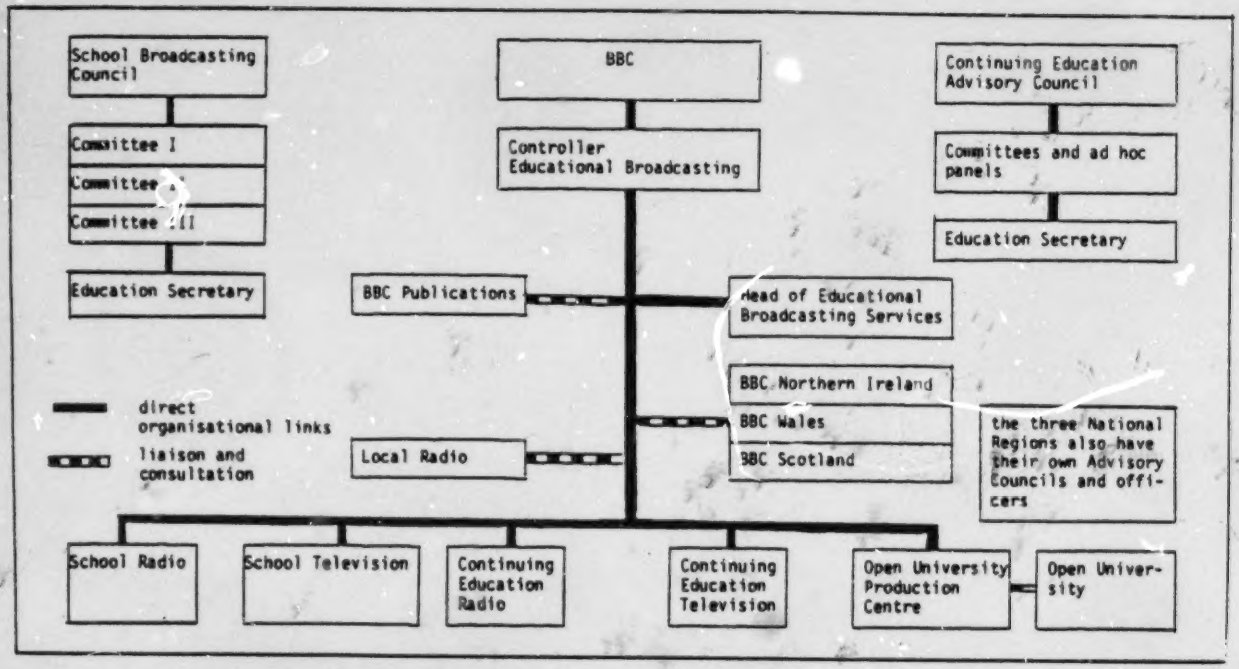
Table 3.4: The management structure of the BBC's educational services



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The Controller is also the BBC's chief spokesman in discussions with the senior manager of the Open University. He is a member of the university council, the planning council and the body for continuing education.

As second member of the CEB unit the Head: Educational Broadcasting assits the Controller in specific fields such as copyright, publications and maintaining contact with the Open University. He is also responsible for negotiations with the national regions.

In July 1980 the staff position of the BBC's Educational Broadcasting unit was as follows:

LEVEL	POST GROUP	NUMBER	TOTAL
1	CONTROLLER	1	1
2	MANAGEMENT		
	(a) School radio	4	
	(b) School television	4	
	(c) Continuing education (Radio)	2	
	(d) Continuing education (Television)	4	
	(e) Open University	15	29
3	ADMINISTRATION		
	(a) School radio	8	
	(b) School television	10	
	(c) Continuing education (Radio)	9	
	(d) Continuing education (Television)	11	
	(e) Open University	54	92
4	PRODUCTION		
	(a) School radio	59	
	(b) School television	60	
	(c) Continuing education (Radio)	25	
	(d) Continuing education (Television)	76	
	(e) Open University:		
	(i) Production and the making of programmes	111	
	(ii) Technical	115	
	(iii) Servicing of facilities	19	465

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The total staff in July 1980 was therefore 587 but had grown to about 800 in 1983 according to the present Controller.

In 1979-1980 the budget of the BBC's educational service was as follows:

. Controller's Educational Council budget	£ 987 000
. Broadcasting Unit	£ 132 000
. School radio	£ 2 439 000
. School television	£ 5 650 000
. Continuing education (Radio)	£ 699 000
. Continuing education (Television)	£ 6 849 000
. Open University	£ 5 878 000
TOTAL 1979-1980	£22 634 000

Radio broadcasts for schools were begun in 1927 and a school television service was instituted by the BBC in 1952. In a BBC pamphlet published in 1980/81 the following was said about television in schools: "Use of the service expanded rapidly so that now almost every school in the country is equipped to receive television broadcasts, with over 90 percent of primary schools and about 80 percent of secondary schools making use of BBC-programmes. The rapidly expanding provision of video tape-recorders, especially in secondary schools, is giving school television the flexibility and adaptability which the tape-recorder conferred on school radio more than a decade ago".

It is also important to note that educational broadcasts became a feature of the BBC's External Service. The BBC (1980/81: 1) had the following to say about this: "From a small, purely radio operation which started during the last war, BBC English by Radio and Television, a part of External Services, now teaches English to millions of learners in over 100 countries through radio, television, film, video, publications and audio-cassettes".

3.6 THE FINANCING OF EDUCATIONAL BROADCASTS

3.6.1 Introduction

The financing will be briefly considered in terms of three countries:

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Israel, Germany and Britain, seeing that these countries have already been discussed as the main representatives of the three educational broadcasting models.

3.6.2 Israel

The Ministry of Education and Culture, under which the Instructional Television Centre falls, provides the funds for the activities and programme production of the ITC as part of the total education and culture budget.

3.6.3 Germany

The various broadcasting stations adhere to their directive to entertain, to inform and to educate and provide the finance for the production of educational programmes from their own revenue.

The FWU, which serves as a national production centre for educational programmes, provides the necessary funds mainly from its own revenue sources. These sources include the broadcasting stations both inside and outside Germany which buy programmes from them.

The total operating budget in 1982 amounted to DM 35 000 000, of which FWU itself provided DM 30 000 000. The remaining DM 5 000 000 was jointly provided by the education authorities of the 11 Länder or German states.

3.6.4 Britain

The viewpoint of the BBC here is that its licence requires it to entertain, to inform and to educate.

Seen in this light the BBC therefore regards it as its duty also to finance the educational function largely from its own funds which are derived from licence and advertising revenue. Formal education for schools - radio and television - is thus according to the BBC its financial responsibility. It is argued that this in fact is necessary if the

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BBC is to retain its programme autonomy as to what eventually reaches the air waves.

The Open University project is, however, financed by the authorities because

(i) postschool instruction of this nature is in a sense a voluntary undertaking which does not involve a total group of the population - for example school-going children - but rather a minority group that decides itself to study further;

(ii) the project is coupled to a certain kind of university (the OV which is a correspondence and extramural institution) and therefore does not involve all the universities in the country in the way that all schools can link up with school television.

3.7 SUMMARY

3.7.1 Introduction

Radio and television are widely used throughout the world in developed as well as developing countries for formal, informal and non-formal education and training. In the case of the developing countries, these media often play a primary role in the total strategy of national upliftment and development.

3.7.2 Educational broadcasts in certain foreign countries

(1) Britain

The BBC has been broadcasting educational radio programmes since 1922. Since 1953 television has also been used for educational purposes. In the formal education situation radio and television play an important role in schools as well as at tertiary level with the OV project.

In the non-formal context the media are used in particular for literacy instruction and social action programmes.

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Informal projects are mainly concerned with broadcasts on the national welfare and general matters of interest to adults. From April 1979 to March 1980 the following total broadcasting hours were taken up by educational programmes:

School radio	:	774
School television	:	518
Continuing education (Radio)	:	320
Continuing education (Television)	:	426
Open University	:	
(a) Radio	:	828
(b) Television	:	1 152

(2) Germany

Besides being concerned with formal broadcasts for schools, the Telekolleg project of the Bayerischer Rundfunk in Germany exists as a college-of-the-air project. It caters for formal as well as non-formal radio and television programmes. Viewers and listeners can decide whether they want to participate in examination-oriented (formal) or non-examination oriented projects.

(3) The Netherlands

The most important project in the Netherlands, besides similar formal, non-formal and informal broadcasts as in Britain and Germany, is the so-called Open School, an educational institution for poorly qualified people over 18 who through correspondence and the media want to improve their qualifications.

(4) Japan

In Japan there are comprehensive formal, informal and non-formal educational and training projects for the media. The NHK devotes special attention here to radio and television broadcasts for schools. The two media overlap purposely in their broadcasts and both cover subjects such as music, English, literature, Japanese, geography and

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history.

Non-formal broadcasts of a cultural nature are aimed particularly at enrichment education for adults. Agricultural guidance and business management form part of these courses.

Informal projects are aimed at the enrichment of all age groups with a view to preparing the population at large for modern Japanese life.

Every week hundreds of air time hours are devoted by NHK's general and educational television networks and by Radio I and Radio II to formal, non-formal and informal broadcasts.

(5) Israel

Here educational broadcasts of a formal, non-formal and informal nature are done by the Instructional Television Centre independently of the general television service. The ITC is responsible for transmitter air time during the day and the general service for air time at night.

The ITC falls under the Minister of Education and Culture. About eight hours each week day are devoted to educational broadcasts.

(6) India

The emphasis here falls on national development and literacy programmes during which attempts are made to influence the attitudes of viewers and listeners and to encourage group follow-up work. Teleclubs are established that involve communities as well as programme makers. They have achieved outstanding follow-up results.

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(7) Asia

In Asia serious problems are caused by very low living standards, inadequate productivity of workers, a poorly developed education system, illiteracy and poor health conditions. A national development programme has been launched in which radio and television play a primary role.

(8) Pakistan

A special project has been undertaken to combat the critical literacy problem in the country.

(9) Certain African countries

An educational technological system has been introduced in various schools on a large scale. Katz and Wedell (1978: 41) however say the following about the Third World: "Time and again in our country studies we have come across broadcasting systems that on paper look comprehensive and effective, but a single spot check whether of production, transmission or reception facilities has shown the systems to be seriously defective. For this reason all statistics in the Third World should be treated with caution". Initially the BBC and American broadcasting systems were copied but as a result of political instability the whole broadcasting setup was also adversely affected.

(10) Russia

There is an extensive educational network for radio and television in Russia. In education the greatest possible use is made of technological aids. The aim of these educational projects was to increase productivity and strengthen the economy so that the way could be paved to eliminate illiteracy, with the help of television, over a period of seven to ten years. The project was preceded by an intensive teacher training course of 21 telelessons. After the

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project, research results revealed that 426 000 women and 269 000 men had achieved basic literacy during a five year period at 59,11 roubles a person.

(11) Poland

Educational services of this nature are also available in Poland.

3.7.3 Some important considerations for the introduction of an effective educational broadcasting service

(1) The partnership between the broadcasting organization and the users

A balanced relationship between the users of ER and ETV and the broadcasting service is essential to ensure meaningful involvement on the part of the user and optimal use of ER and ETV.

(2) The partnership between radio and television in educational programmes

Radio and television supplement each other in educational programmes and should function as a unit.

(3) The necessity for continuing research

Continuing research within an educational broadcasting service in order to determine the needs of target groups, the effect programmes have, target group sizes, etc. is essential.

(4) Publications and other supporting media

The basic idea is that publications and other supporting media together with continuing research should constitute the two pillars on which an educational broadcasting service should be established. Such additional media are for pre and after-care purposes part of the broadcasts directed at teachers and pupils and consist of explanatory publications, work sheets, slides, audio and video cassettes, etc.

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(5) The necessity of following a modus operandi that is responsible from both an educational and training point of view in programme planning

The basic premise is that programme planning should not be incidental but that it should be a purposive undertaking within a broader and often officially prescribed syllabus.

Specialists such as academics, teachers, subject advisers, et al. should participate in an organized manner in the planning and execution of all programme projects.

This approach is closely followed in countries such as Britain, Germany, Israel, Japan and the Netherlands.

3.7.4 Copyright

The view is that copyright stipulations, as has happened in Britian and elsewhere, will have to be amended to accommodate certain essential exceptions in the case of educational broadcasts - for example concerning the recording of programmes over the air.

3.7.5 Different models of control in other parts of the world

(1) The authorities-controlled model

An example of such a model is the Instructional Television Centre in Israel. Here the educational service is totally divorced from the autonomous general television network and the ITC functions under the direct control of the Ministry of Education and Culture.

(2) The national network-controlled model

An example of such a model is the Bayerischer Rundfunk in Germany.

In this model certain programme categories - for example preschool, child and youth programmes - are allocated to the educational service with the directive that the programmes should be designed to

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educate, inform and entertain rather than to entertain, inform and educate, as is the case with general broadcasts.

Here the national network has full control over programme content and is under no pressure to adhere closely to a comprehensive authorities-determined education plan.

(3) A relatively independent unit as part of a national broadcasting service

The obvious example is the BBC setup where the educational service exists as a unit within the BBC but is quite separate from the general programme services.

This unit is run by its own executive official, the Controller of Educational Programmes, who is directly responsible to the director-general. The Controller also works closely with the educational authorities in the planning of educational programmes. The educational service has its own didactically oriented and responsible programme policy which is independent of general programme policy.

3.7.6 The financing of educational broadcasts

In the case of authorities-controlled models such as that in Israel, the operating expenses of the educational service are financed exclusively as part of the education authorities' budget.

As far as the two national network-oriented models are concerned, for example those in Germany and Britain, the tendency is to interpret the commissions of these services in terms of their broadcasting licences in such a way that they have to accept the financial responsibility to entertain, inform and educate.

Consequently the task of educating is largely financed from their own sources, for example from licence fees and advertising revenue.

However in the case of the OV project the financing of broadcasts is not

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undertaken by the BBC but by the State.

The reason given for this departure from normal policy is that the Open University is an individual enterprise that does not involve all universities at national level but merely a minority group of students.

In contrast the BBC's commission to entertain, inform and educate should be interpreted in a broad national context.

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CHAPTER 4

THE CURRENT SITUATION WITH REGARD TO RADIO AND TELEVISION AND EDUCATIONAL MEDIA IN THE RSA

4.1 THE CURRENT MEDIA SETUP AND THE SCOPE OF THESE MEDIA

4.1.1 Introduction

Regarding the local situation, from the outset the following important distribution of the total target group must be borne in mind:

(i) Separate radio services in the Black Languages serve the Black people, while Whites, Coloureds and Asians are served by their radio services;

(ii) where TV 1 serves Whites, Coloureds and Asians, Blacks are served in the five Black languages by TV 2 (Zulu and Xhosa) and TV 3 (Southern Sotho, Northern Sotho and Tswana).

In addition the coverage areas of the television services and radio differ: where TV 1 for example serves the urban and rural areas and aims eventually to have a nearly 100% coverage, TV 2 and TV 3 mainly serve the Black inhabitants of the White urban areas in the RSA.

4.1.2 Factors that affect the scope of the media

As far as radio is concerned, there is no coverage problem either in the services in the Black languages or in the English and Afrikaans services. In the case of television, TV 1 covers virtually the whole country, but there are certain serious deficiencies with TV 2 and TV 3:

(i) TV 2 and TV 3 were primarily planned for Black people in the White urban areas;

(ii) the fact that electricity is not available in some parts places serious restrictions on the expansion of TV 2 and TV 3 to rural areas and in some cases even to urban areas.

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4.1.3 The reach of a possible formal broadcasting service for educational purposes

The reaching distance in respect of the radio and television services in English and Afrikaans does not pose any serious problems.

In the case of the Black radio services reaching distance is also not a problem, but the television services present real problems, especially in the rural areas.

These problems can however be overcome by one or more of the following measures:

(i) TV 2 and TV 3 can be extended to reach the rural areas - in the longer term;

(ii) in the shorter term a video cassette service can be introduced for schools beyond the reach of TV 2 and TV 3 so that programmes broadcast for schools by these channels can also be available to outlying areas;

(iii) electricity problems can at present be relatively inexpensively overcome by providing cheaper solar energy or even smaller generator units at schools.

As in the case of the project in India that was described earlier, a cassette service can be optimally used by providing such a service during the day for formal education. Group viewing sessions can be organized on the basis of the teleclub guidelines that were among other things followed in the India project.

4.1.4 School radio service

A school radio service for Black schools has been operated by the SABC since April 1964.

There are school broadcasts from Mondays to Fridays. Their duration was initially three hours a week but this has now been extended to 3 h 45 minutes a week.

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The daily half-hour broadcasts are rebroadcast so that an additional 2 h 30 minutes can be added to the total weekly broadcasts which cover subjects such as English, Afrikaans, the mother tongue, biology, vocational guidance, general science, nature study, health guidance and religious instruction.

Publications aimed at the teacher and the pupil supplement the broadcasts and appear twice a year. Their format is currently being modernized.

4.1.5 Educational broadcasts

Regarding informal education, the SABC has decided to introduce the following kinds of programmes on a limited scale on the radio and television services for Blacks from January 1984:

(1) Preschool child

Ten minutes a day from Mondays to Thursdays will be devoted to school readiness programmes on TV 2 and TV 3. They will be aimed at five-year-old Black preschool children.

(2) Parent guidance programmes

Ten minutes of television a week on Sundays will be devoted to the parent and his role in the school readiness of his child.

(3) Adult education

Twenty minutes a day from Mondays to Thursdays will be devoted on TV 2 and TV 3 to subjects such as manpower utilization, industrial development, social literacy and community education.

The proposed informal broadcasts will therefore take up two hours a week of air time on TV 2 and TV 3 respectively. The week's broadcasts will be repeated on Sundays so that a further two hours a week

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per service will be added to the total weekly air time.

The same informal categories will be covered by radio as by television. Programmes for television and radio will be planned jointly but because of the absence of the visual dimension, radio air time will be about 30% more than that for television.

Regarding TV 1, a head for educational programmes was recently appointed and he will assume duty on 1 January 1984. The planning of the department's activities will then begin.

It is thus clear that South Africa - and Southern Africa - has a considerable backlog to make up in connection with the broadcasting of educational programmes of a formal, non-formal and informal nature. The question of educational broadcasts has already become so pressing that no more time should be wasted in introducing such broadcasts.

4.2 EDUCATIONAL MEDIA IN GENERAL

(i) Co-ordinated planning for the use of media in the education of all the population groups is a matter that requires urgent attention.

(ii) The National Committee for Educational Technology (NCET)

The NCET acts in a co-ordinating capacity in the broad field of educational technology and advises the Minister of National Education, the Committee Heads of Education (CHE) and other educational bodies on technology in education. All education departments as well as institutions such as the HSRC, SABC, SABS, Federal Council of Teachers' Associations, Association of Technikons and the Committee of University Principals have one or more representatives on the NCET which falls under the Director-General of the Department of National Education.

(iii) Each education department has within its own structure an educational media service in one form or another. In some cases this service is linked to an educational library service and in other cases it is

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quite separate.

(iv) Through its educational technology division the Department of National Education runs a National Film Library that renders a lending service for films, strip films and records in respect of formal, non-formal and informal education to branches in Pretoria, Cape Town and Pietermaritzburg.

(v) The use of educational media is less co-ordinated in non-formal and informal education. Different media are for example used on a large scale for guidance purposes by the Department of Agriculture and the Department of Health and Welfare, but there is no co-ordination between these departments. The same applies to the use of educational media in the Defence Force (COLET) and also with respect to the church, numerous women's organizations, etc.

In commerce and industry extensive media material is available for training. As far as can be determined this material and the different media are not equally effectively used everywhere. There is a great need for training in the meaningful use of media and in the production of specific software for local conditions.

(vi) In the report of the Work Committee: Educational technology (HSRC 1981: p 9, 10) the following conclusion is reached in respect of the situation regarding educational media in the RSA: "At present there is no co-ordinated planning, control or organization of educational technology in the RSA which includes the education for all race groups.

- There is no central clearing house for the hardware of educational technology in the RSA
- Because of the lack of an educational technology infrastructure the educational technologist has little or no contact with the curriculum designers
- The training of specialists in the area of media is done on a limited and totally unco-ordinated basis
- The planning, design and production of programmes is also totally

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unco-ordinated even between and within the various education departments

- There also seems to be little co-ordination between educational technology specialists and the persons responsible for the physical planning of educational facilities".

The above situation still exists as can be gathered from 4.2 (i), 4.2 (ii) and 4.2 (iii).

(vii) As a follow-up to the HSRC Education Report (HSRC 1981), a start was made with research into various priority research fields. For example the Work Committee: The computer in education and training (WCET) was established and its report was submitted to the Minister of National Education in August 1983. The report contains various recommendations on the future use of the computer in education and training in South Africa.

4.3 SUMMARY

From the preceding it is clear that media utilization in respect of education and training in Southern Africa is largely unco-ordinated. For example the SABC is engaged in certain activities in this field without the co-ordinated involvement of the educational authorities because an infrastructure for the use of media does not exist as yet. Among other things this means that pressing learning needs cannot be attended to because the necessary co-ordinating and financing channels have not been created. Only in the case of the school radio service for Black schools is there the desired co-ordination between the SABC and the Department of Education and Training.

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CHAPTER 5

RECOMMENDATIONS

5.1 In the light of the fact that Educational Radio (ER) and Educational Television (ETV) have been successfully used in other parts of the world to meet specific learning needs (cf. Chapter 3), and in the light of the fact that various learning needs that require urgent attention have been identified on a macrolevel (cf. Chapter 2), it is recommended that ER and ETV be used as quickly as possible in a co-ordinated way in formal, in-formal and non-formal education in Southern Africa in order to satisfy the identified high priority learning needs. The potential contribution that ER and ETV can make to the solution of known education and training problems in Southern Africa cannot be sufficiently emphasized.

5.2 It is recommended that ER and ETV be defined as follows to distinguish them from other radio and television programmes:

ER and ETV programmes are programmes that have been developed within the framework of a total training, teaching and educational strategy and that are directed in a systematic and continuous way at informal, formal and non-formal education. By a total training, teaching and educational strategy is meant that

- learning needs are determined in an accountable manner;
- the degree to which ER and ETV can meet these needs is ascertained;
- specific broadcasting times for ER and ETV programmes are set in consultation with the institutions concerned with specific target groups.

There are other programmes that also have educational and educative value but they are not regarded as ER and ETV programmes because their educational content is largely incidental.

5.3 It is also recommended that the following points should be observed in the implementation of ER and ETV:

5.3.1 The "Principles for education provision in the RSA" as formulated in the HSRC Education Report should also serve as a guideline for ER and ETV programmes.

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5.3.2 With regard to formal education, ER and ETV can only succeed if the relationship between the broadcasting authorities and the education departments is clearly spelt out from the beginning. In this connection it is also essential that the use of radio and television as aids in formal education be seen as an integral part of the total education provision and satisfaction of learning needs.

5.3.3 ER and ETV should supplement each other and not be separated.

5.3.4 Informal, formal and non-formal educational programmes should be considered and carried out together for ER and ETV since the learning needs that these programmes aim to fulfil are interdependent.

5.3.5 ER and ETV should be supplemented with publications and other media (slides, audio cassettes, etc.) The ER and ETV service should therefore from the beginning make provision for the compilation and distribution of publications and for the production and distribution of other supporting media.

5.3.6 Continuing research aimed at the ongoing determination of learning needs, the most effective methods of programme planning and production and the effect of programmes should enjoy high priority. From the outset a research section should be established within the ER and ETV service.

5.3.7 Programme planning should meet the demands of education and training. For this purpose work committees consisting of broadcasting specialists, media specialists, education and training specialists and the subject specialists concerned should be established for the planning of programmes.

5.3.8 Interest groups that are reached through ER and ETV programmes should be involved at different levels.

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5.3.9 The users[1)] (Category 2) of ER and ETV programmes should be trained on an ongoing basis in the correct use of the broadcasting media.

5.3.10 ER and ETV programmes should be planned in such a way that feedback (possibly in the form of work cards etc.) is given to the teaching guide by the learner. In this way and in other ways it must be ensured that programmes satisfy a clearly stated learning objective.

5.3.11 Because of the unique and specialized nature of ER and ETV, a section for ER and ETV should be so structured that this uniqueness is fully reflected in the broadcasting setup.

5.4 It is recommended that ER and ETV be established on the basis of the following guidelines:

5.4.1 First possibility (within the SABC in consultation with interested institutions)

(a) Because the SABC has the necessary broadcasting expertise and infrastructure, ER and ETV should be established in the SABC, but with the creation of mechanisms through which the users of ER and ETV can be meaningfully involved. This recommendation refers in large to the BBC model.

[1)] The following categories of users can be distinguished:

Category 1: Education departments, other education authorities and organizations that offer training

Category 2: Teachers, trainers, et al.

Category 3: All learners (children as well as adults)

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(b) Because of the unique and specialized nature of ER and ETV, which includes continuous liaison with participating institutions, a section for ER and ETV should function independently of, yet in consultation with, other programme sections.

(c) Policy regarding ER and ETV should be determined by advisory bodies on which users (representatives of Categories 1 and 2) serve.

(d) There should be work committees for programme planning.

Such committees consisting of specialists in the following fields:

- the particular subject,
- broadcasting,
- education, and
- (industrial) training

should be appointed for every programme series by the project leader in consultation with the research section of ER and ETV.

(e) Financing of ER and ETV would be as follows:

- Partly by the provider of ER and ETV (the SABC) out of its own funds in view of the fact that it is the SABC's task to entertain, inform and educate.
- Partly by the users (Category 1) of ER and ETV (including the State).
- From other sources that from time to time might present themselves.

(f) Protected air time would be reserved for ER and ETV.

5.4.2 Second possibility (a new organization)

(a) A separate organization for ER and ETV (Southern African Educational Radio and Television Service - SAERTV) broadly based on the Israel model would be established for Southern Africa.

(b) The SAERTV would be run by a board of control. The members of the board would be appointed by a cabinet committee of the ministers concerned under the chairmanship of the Minister of National

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Education

(c) The SAERTV would be mainly responsible for planning and supervising the production of ER and ETV programmes for informal, formal and non-formal education. The production facilities of the private sector could be used, while other possibilities could also be investigated

(d) Financing

The SAERTV would be financed by participating institutions such as the SABC and certain government departments, the private sector and those national states and members of the TBVC countries who wanted to be involved for their own domestic objectives

(e) Protected air time

Protected air time on the SABC's transmitters would be obtained by the SAERTV

(f) Policy concerning ER and ETV would be determined by advisory committees on which users (representatives of Categories 1 and 2) sat

(g) Advisory bodies for ER and ETV

The advisory bodies would consist of representatives of the SAERTV and users of ER and ETV such as government departments, the SABC, the private sector, the national states and members of the TBVC countries. The members of these advisory bodies would be appointed by a cabinet committee consisting of the ministers concerned under chairmanship of the Minister of National Education. The most important function of the advisory bodies would be to advise the Council of the SAERTV on all matters concerning its broadcasts. Because of the scope and diversity of the SAERTV's activities it might be necessary to establish more than one advisory body

(h) Work committees for programme planning

Work committees for programme planning consisting of specialists in the following fields among others

- the subject concerned,
- broadcasting,
- education,
- (industrial) training

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would be appointed for every programme series by the project leader in consultation with the research section of ER and ETV.

5.4.3 Financial implications of the proposed possibilities

(a) The preceding will have the following financial implications for the first year if 750 and 900 minutes respectively for ETV and ER programmes per service are broadcast. Naturally it will be impossible to broadcast 750 (ETV) and 900 (ER) minutes from the outset.

1. Programme production (cf. Appendix C for more details)

(i)	Informal education	
	ETV	R24 000 000
	ER	3 360 000
(ii)	Non-formal education	
	ETV	12 000 000
	ER	3 360 000
(iii)	Formal education	
	ETV	24 000 000
	ER	3 360 000
	Total amount for programme production	R70 080 000

2. Office space, furniture and sundries

First possibility (5.4.1)	
Once only	R 170 000
Current	1 500 000
Second possibility (5.4.2)	
Once only	300 000
Current	2 000 000

3. Personnel

First possibility (5.4.1)	2 600 000
Second possibility (5.4.2)	3 500 000

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4. Publications and supporting media

First possibility (5.4.1)	R 2 000 000
Second possibility (5.4.2)	2 000 000

5. Research

First possibility (5.4.1)	500 000
Second possibility (5.4.2)	500 000

(b) Summary

	First possibility	Second possibility
Programme production	R70 080 000	R70 080 000
Office space, furniture, etc.	1 670 000	2 300 000
Personnel	2 600 000	3 500 000
Publications and supporting media	2 000 000	2 000 000
Research	500 000	500 000
	R76 850 000	R78 380 000[1)]

5.4.4 The work committee recommends that the first possibility be implemented on the main grounds that the integration of radio and television in education is a matter of urgency, that there will be cost benefits and that, in particular, duplication of facilities and high-level manpower will be avoided. Two members of the work committee however thought that the second alternative should be implemented (their reasons were not placed on record).

5.5 A video cassette service should be introduced together with ETV.

5.6 The reception areas of the television service for Blacks should in the course of time be extended to include the rural areas.

5.7 Further investigation should be conducted into

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1) The leasing of transmitters and the cost of the possible creation of separate production facilities are not included.

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5.7.1 the problems surrounding copyright and ways of using ER and ETV meaningfully in education and training;

5.7.2 different ways of providing and maintaining television sets and electricity generators as economically as possible;

5.7.3 the possibility of enabling learners to obtain recognized qualifications such as a matriculation certificate with the help of ER and ETV;

5.7.4 the development of an infrastructure for the establishment of teleclubs so that ER and ETV can be optimally used;

5.7.5 the creation of mechanisms for closer liaison between the ER and the ETV service and a future centralized and decentralized infrastructure for educational technology and curriculation;

5.7.6 the development and implementation of interactive television systems;

5.7.7 interstate collaboration regarding ER and ETV;

5.7.8 the future use of various media in education and training (including ER and ETV), and

5.7.9 the training of the users of ER and ETV.

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APPENDIX A: HANCOCK'S (1971: 80) SUMMARY OF THE LIMITATIONS AND POTENTIAL OF ER AND ETV

MEDIUM	STRENGTHS	WEAKNESSES
TELEVISION	1. It is a visual medium which allows for a creative production approach, and full integration with all other visual aids	1. It requires an electrical supply and a fully developed TV network
	2. It can have a large audience, if required, which may be reached simultaneously (with a single transmission) or successively (with repeat transmissions)	2. It is expensive unless it is used extensively
	3. It is an entertainment medium and as such is psychologically acceptable to most students, especially at the lower levels	3. Receivers are expensive to acquire and can only be justified by full utilisation
		4. It requires proper integration with a teacher's scheme of work, and detailed preparation and follow-up
		5. Programming must be fully integrated with the overall educational system curriculum
RADIO	1. It has imaginative potential (because the student/listener is required to add his own visual interpretation)	1. It requires a fully developed radio network
	2. It is able to reach a large audience, if required, either simultaneously, or (with repeats) successively	2. Facilities are fairly expensive, although receivers may be cheaply produced and a mains electrical supply is not required at the reception point
	3. As an entertainment medium, it is psychologically acceptable to most students	3. It is a non-visual medium
		4. It requires full integration with a teacher's scheme of work, and adequate preparation and follow-up
		5. It requires proper integration with the overall educational system and curriculum

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APPENDIX B: TELEVISION AS AN EDUCATIONAL MEDIUM ACCORDING TO THE REPORT OF THE COMMITTEE OF INQUIRY INTO THE USES OF TELEVISION IN EDUCATION (1972:

"2.3 TELEVISION AS AN EDUCATIONAL MEDIUM 26, 27)

2.3.1 From expert evidence it has received from overseas consultants, from reports of the vast amount of research into educational television and from submissions by interested groups in this country, the Committee is satisfied that educational television, properly developed, could have great impact, but that in the absence of adequate planning and implementation the benefits can be nullified. This is borne out by certain recent reports from the United States such as the 1970 statement by the Committee on Instructional Technology to Improve Learning.

2.3.2 The limitations which broadcast television can exhibit in practice include the fact that it is a one-way means of communication and no direct 'feedback' is provided for; the difficulties of catering for pupils of different academic ability particularly in subjects such as mathematics where special emphasis is placed on the logical sequence of ideas; the need for providing a clear professional role for the class teacher during as well as before and after a programme; the need for television to provide something much more than a 'talking face' on a screen; and the need for good viewing conditions in the classroom. A major difficulty encountered overseas, especially in secondary schools, has been in the fitting of programmes into school timetables, although this can in part be met by the use of videotape recorders (see paragraph 2.3.11).

2.3.3 The advantages of television are considerable. Its use has made it possible to reinforce and enrich the curriculum, providing an effective way of introducing new courses and keeping pace with the rapid advance of knowledge in many subjects. In all countries speed and effectiveness of curriculum change are becoming increasingly important and the use of television could save years of in-service training of teachers by other means. Curriculum change and in-service training are continuing needs and in the Committee's view the capacity of television to meet them is one of its most important advantages.

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2.3.4 The planned use of television, by bringing into the classroom material, demonstrations, or experiments that are quite beyond the resources of individual schools, can provide additional dimensions to education that even the finest teacher cannot offer alone. It can bring a sense of immediacy either of time or place. It should be stressed, however, that television is essentially a means of communication, not a teacher, and its effectiveness is determined by the skill and ingenuity of the user. An expensive installation can contribute nothing without good programmes and teachers skilled in its use.

2.3.5 Television can also play a valuable role by bringing together a variety of other audio and visual aids and by combining them in the one medium which the teacher can effectively use. Pictures, charts, slides, films, flannelgraph, magnetboard, epidiascope, and overhead projector can all be employed by the television teacher who has available the resources of the production team when the sheer logistics of co-ordinating them would defeat his colleague in the classroom.

2.3.6 Television should not be regarded as a medium which will replace the more conventional forms such as films, filmstrips, slides and tape recorders. Schools should use a multi-media approach in which teachers have a variety of resources at their disposal and from which they can select the most suitable approach for their needs.

2.3.7 Television could well make it possible for students in country areas to have courses comparable in variety and quality to those offered in city schools. This advantage is particularly important in an area of rapidly changing curricula. The problem of providing specialist staff and equipment for rural secondary schools would be partially overcome by the use of television.

2.3.8 The current trend in education is towards greater pupil activity, more flexible rates of progress for individual students, and a 'climate' in which students have greater responsibility for their own learning. The use of television programmes, designed to include student follow-up activity, and supported by video recording devices which enable the student to move at his own pace and to revise lessons where necessary, provides the means for realising such possibilities. Indeed, the impetus which educational television can give to this more flexible approach to learning may well prove one of its main contributions".

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APPENDIX C: FINANCIAL IMPLICATIONS OF THE PROPOSED ALTERNATIVES

1. Programme production

SERVICE	TYPE OF PROGRAMME	1 AIR TIME PER WEEK	2 COST PER MINUTE	3 ESTIMATED COST
TV 1 Afrikaans	Informal	300 minutes	R500	R6 000 000
	Non-formal	150 "	R500	3 000 000
	Formal	300 "	R500	6 000 000
TV 1 English	Informal	300 minutes	R500	R6 000 000
	Non-formal	150 "	R500	3 000 000
	Formal	300 "	R500	6 000 000
Radio - Afr.	Informal	300 minutes	R 40	R 480 000
	Non-formal	300 "	R 40	480 000
	Formal	300 "	R 40	480 000
Radio - Eng.	Informal	300 minutes	R 40	R 480 000
	Non-formal	300 "	R 40	480 000
	Formal	300 "	R 40	480 000
TV 2	Informal	300 minutes	R500	R6 000 000
	Non-formal	150 "	R500	3 000 000
	Formal	300 "	R500	6 000 000
TV 3	Informal	300 minutes	R500	R6 000 000
	Non-formal	150 "	R500	3 000 000
	Formal	300 "	R500	6 000 000
Black Radio (9 services)	Informal	300 minutes	R200	R2 400 000
	Non-formal	300 "	R200	2 400 000
	Formal	300 "	R200	2 400 000

) These times include time set aside for the repetition of programmes.

2) The cost per minute is based on the following assumptions:

- That various television programmes in dubbed form or with changes can be broadcast repeatedly by the services. This can bring down the cost per minute per television programme service to R500 as various services contribute to the total production costs
- That there will be opti.. co-ordination between the different sections of the educational services

3) This budget was worked out for forty weeks.

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